Legacy review of GRASS 1 Program

Evaluation report

Prepared for the Department of the Environment, Tourism, Science and Innovation by Mosaic Insights

August 2025

Mosaic Insights recognises and acknowledges the unique relationship and deep connection to Country shared by Aboriginal and Torres Strait Islander people, as First Peoples and Traditional Owners of Australia.
We pay our respects to their Cultures, Country and Elders past and present.

Artwork by Melissa Barton. This piece was commissioned by the Alluvium Group, and tells our story of caring for Country, through different forms of waterbodies, from creeklines to coastlines. The artwork depicts people linked by journey lines, sharing stories, understanding and learning to care for country and the waterways within.

This report has been prepared by Mosaic Insights Pty Ltd for the Department of the Environment, Tourism, Science and Innovation under the contract titled 'DESI Grazing Program Review'.

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1 Definitions

Acronym	Description
APLM	Action Plan for Land Management
BMRG	Burnett Mary Regional Group
DAF	Queensland Department of Agriculture and Fisheries (now DPI)
DETSI	Queensland Department of the Environment, Tourism, Science and Innovation
DP	Delivery partner
DPI	Queensland Department of Primary Industries (formerly DAF)
FBA	Fitzroy Basin Association
GRASS	Grazing Resilience and Sustainable Solutions
KEQ	Key Evaluation Question
MERI	Monitoring, Evaluation, Reporting and Improvement
NRM	Natural Resource Management (organisations)
NQDT	NQ Dry Tropics
n=	Number of responses (survey or interview depending on subsection)
OGBR&WH	Office of the Great Barrier Reef and World Heritage
PoP	Perceptions of Practice
P2R	Paddock to Reef Integrated Monitoring, Modelling and Reporting Program
TAP	Technical Assessment Panel

2 Executive summary

The first phase of the Queensland Government's *Grazing Resilience and Sustainable Solutions* (GRASS) program, referred to as GRASS 1, focused on improving land management and reducing soil loss and sediment run-off from grazing enterprises in the Burdekin, Fitzroy, and Burnett Mary catchments to the Great Barrier Reef (the Reef). Delivered from 2019-2022 by the Department of Primary Industries and regional natural resource management groups (NQ Dry Tropics, Fitzroy Basin Association, and the Burnett Mary Regional Group), GRASS 1 provided on-ground support to graziers. Key activities included assessing land condition, developing action plans for land management improvements (APLMs), and offering financial incentives for eligible projects. It aimed to enhance land condition, pasture productivity, and water quality flowing to the Great Barrier Reef. The second phase of the program (GRASS 2), which commenced in 2023, has been further refined following lessons and feedback from delivery partners and graziers in GRASS 1. This report looks back at the legacy of GRASS 1, to record the longer-term impacts of GRASS 1 on sustained improvements in land management and collate any knowledge gaps or suggestions offered by those participants.

This evaluation focusses on four Key Evaluation Questions:

1. What evidence is there that the project has contributed towards the Reef 2050 Water Quality Improvement Plan (WQIP) land management and water quality targets?
2. What progress would have been made anyway, in the absence of the Queensland Reef Water Quality Program (QRWQP) funding the GRASS program?
3. What, if any, unanticipated positive or negative impacts have resulted from the program?
4. What are the long-term benefits to this program? What evidence is there to say this?

Evidence for this evaluation has been gathered from multiple sources, including:

- Interviews with 32 GRASS 1 graziers (October - December 2024)
- On-ground verification with 18 GRASS 1 property visits (October – November 2024)
- An online survey sent to all GRASS 1 graziers (January – February 2025)
- Final report on the GRASS 1 program

Key findings

The GRASS 1 program has contributed towards the WQIP land management and water quality targets through its influence in improving 720,890 hectares of poor and degraded grazing land across almost 3 million hectares. Property visits to eighteen properties were undertaken to evaluate the impact of the program on land management. The findings revealed that almost all of these enterprises continued to implement land management practices aligned with industry standards. These practices included conservative stocking, erosion control, paddock fencing, and preventing cattle from accessing riparian zones. Conversations with land managers indicated a high level of knowledge and a motivation to manage their land effectively, with many expressing they had intentions to transform their properties prior to their participation in the GRASS program.

The property visits revealed that most properties have remained in good condition, although a few recently acquired properties were still undergoing improvements. Seventeen out of the eighteen properties visited received the highest water quality risk rating (A – low water quality risk), with one receiving a B rating (moderate water quality risk). The observations suggest that the landholders who participated in property visits for this evaluation may have already had good land management practices in place (or were primed to change their practices) before joining the program, raising questions about whether the program's target audience was accurately reached. Most properties

visited had received incentives, which may have influenced the sample's representativeness. The three properties relying solely on Action Plans for Land Management (APLM) with no incentive funding reported that the program helped them become aware of land management issues and take actions to address them, although they faced limitations due to the graziers' age, time, and financial constraints.

In the absence of the GRASS 1 program, progress would have been made albeit at a much slower pace. The majority of graziers interviewed indicated that they would have likely improved their land management even without the GRASS 1 program, with 23 out of 32 graziers who were interviewed expressing this sentiment. However, they acknowledged the program's significant role in accelerating these improvements, primarily due to the availability of funding and the support they received from delivery partners. Thirteen graziers highlighted the speed of change in their land condition, while seven noted the outstanding success of their land management efforts. Conversely, a minority of graziers stated they would not have made any improvements without the program, citing barriers such as lack of financial resources, knowledge, and opportunity, which the program helped to overcome. Survey data supported these findings, with only two of the forty-six survey respondents indicating it was 'not at all likely' they would have changed their land management without the program.

The majority of graziers did not report any unanticipated outcomes from their participation. Those few who did note unanticipated outcomes noted that these were positive, such as the surprising speed and effectiveness of landscape recovery, networking opportunities, reduced maintenance needs, and valuable expert advice. Only one participant mentioned an unanticipated significant challenge, specifically the difficulty of maintaining new practices during challenging times, noting however that these became easier over time as land conditions improved.

The GRASS 1 Program has contributed to long-term benefits with clear evidence of ongoing positive outcomes. Data from property visits, along with interviews and surveys, consistently showed improved land conditions and productivity were being sustained. Graziers reported an increase in carrying capacity while maintaining or enhancing land health. Other long-term benefits included increased property value due to better pastures, infrastructure, and water availability, as well as greater business resilience through reduced operational costs, particularly in supplementary feeding and maintenance. The incentive projects also enabled increased infrastructure improvements. Sustainable practices were widely adopted, with all properties surveyed reporting continuous improvement and many graziers expanding their practices beyond the initial project scope. Additionally, 85% of survey participants reported greater confidence in land management, and only three interviewed graziers were unsure about their compliance with Reef Regulations.

Graziers observed that the program's enduring benefits were supported by comprehensive assistance from extension staff, swift and noticeable land improvements such as clear water runoff and better groundcover, and increased confidence among graziers to extend improvements beyond the initial project scope. However, financial limitations, rising material costs, and difficulties in finding contractors posed challenges to some projects. Despite these obstacles, interview and survey data suggest that the support model contributed to lasting practice changes, with participants driven to maintain and expand improvements when resources permitted. Survey data indicated that the main reasons for grazier participation in the GRASS 1 program were improvements in productivity and environmental stewardship. This alignment with graziers' intrinsic motivations suggests that the program effectively provided practical methods to help them achieve their objectives.

Graziers did not view the link between program participation and adherence to Reef regulations as a significant issue or advantage. While awareness of the Reef regulations differed among graziers, most were confident that their properties would meet compliance standards. This confidence stemmed from their understanding of their current land conditions, their land management practices, and their inherent desire to maintain a healthy environment.

Overall, the findings of this evaluation demonstrate the important role that the GRASS 1 program and the delivery partners played in supporting graziers in the Burdekin, Fitzroy, and Burnett Mary regions to improve land condition and reduce sediment runoff to Reef catchment waterways. Graziers expressed strong appreciation for the GRASS 1 Program, valuing the expert assistance, funding for land

improvements, opportunities to learn and apply new techniques, and the rapid, positive results from changes to land management practices. While feedback was overwhelmingly positive, it is important to bear in mind that some graziers had difficulty recalling whether the work they did with the delivery partners was through the GRASS 1 program or other similar programs on offer around the same time.

At least one grazier engaged in this evaluation discussed funding they received, however subsequent checks of the records showed they did not receive any GRASS 1 program incentive project funds. Some suggestions for improvement included increased funding and greater flexibility in funding requirements and clearer eligibility criteria, better communication and promotion of the program to increase awareness (which may also help better recall of the program in future evaluations), more regular follow-up contact with extension officers, and adding networking events for skill-building. Ultimately, the results of this evaluation suggest that most of the land management enhancements made during the course of the GRASS 1 program will continue to persist in the future.

Recommendations

- Consider more and alternative financial support options such as increased funding, access to loans, or other forms of rewards or compensation for participation;
- Improve communication and support between government programs, delivery partners, and graziers to increase program awareness and clarify eligibility;
- Improve program effectiveness for example, follow-up monitoring, additional technical education, and more interaction with delivery partners at all stages; and
- Engage graziers early in future program revisions.

3 Introduction

This report is the second for the *Grazing Resilience and Sustainable Solutions* (GRASS*) Program Review* being undertaken for the Queensland Department of the Environment, Tourism, Science and Innovation (DETSI), through the Office of the Great Barrier Reef and World Heritage (OGBR&WH). The focus of this report is an evaluation of the legacy of GRASS 1, which is the first stage of the GRASS program that ran from 2019 to 2022. The second phase of the program, GRASS 2, is currently running from January 2023 to June 2026. A mid-term review of GRASS 2 has been undertaken as part of this same evaluation project and will be reported separately.

3.1 Context

The GRASS Program is an initiative by OGBR&WH in collaboration with the former Department of Agriculture and Fisheries (DAF), now Department of Primary Industries (DPI), and three Natural Resource Management (NRM) organisations: North Queensland Dry Tropics Ltd (NQDT), Fitzroy Basin Association Ltd (FBA), and Burnett Mary Regional Group for Natural Resource Management Ltd (BMRG). The program aims to improve land condition, reduce sediment loss and thereby improve water quality in the Great Barrier Reef by supporting graziers in the Burdekin, Fitzroy, and Burnett Mary regions (Figure 1) to improve land management.

The GRASS program provides several services (Figure 2), including:

- Extension and Engagement: Supporting graziers in understanding land management impacts and opportunities to improve land condition.
- Action Plans for Land Management (APLM): Developing comprehensive plans to address poor and degraded land conditions.
- Regulatory Support and Project Acknowledgement: Helping graziers understand and comply with grazing minimum standards under Reef protection regulations.
- Incentives: Offering financial support as co-investments for on-ground works to implement APLMs and improve land condition.
- Data Monitoring, Evaluation, and Reporting: Collecting and analysing data to report on program impacts and outcomes, including changes in land management practices, social monitoring outcomes, and estimated sediment reductions.
- Communications Plan: Ensuring effective communication of the program's benefits and outcomes to stakeholders.

These services aim to enhance landholder capacity, improve land condition, and support compliance with environmental regulations.

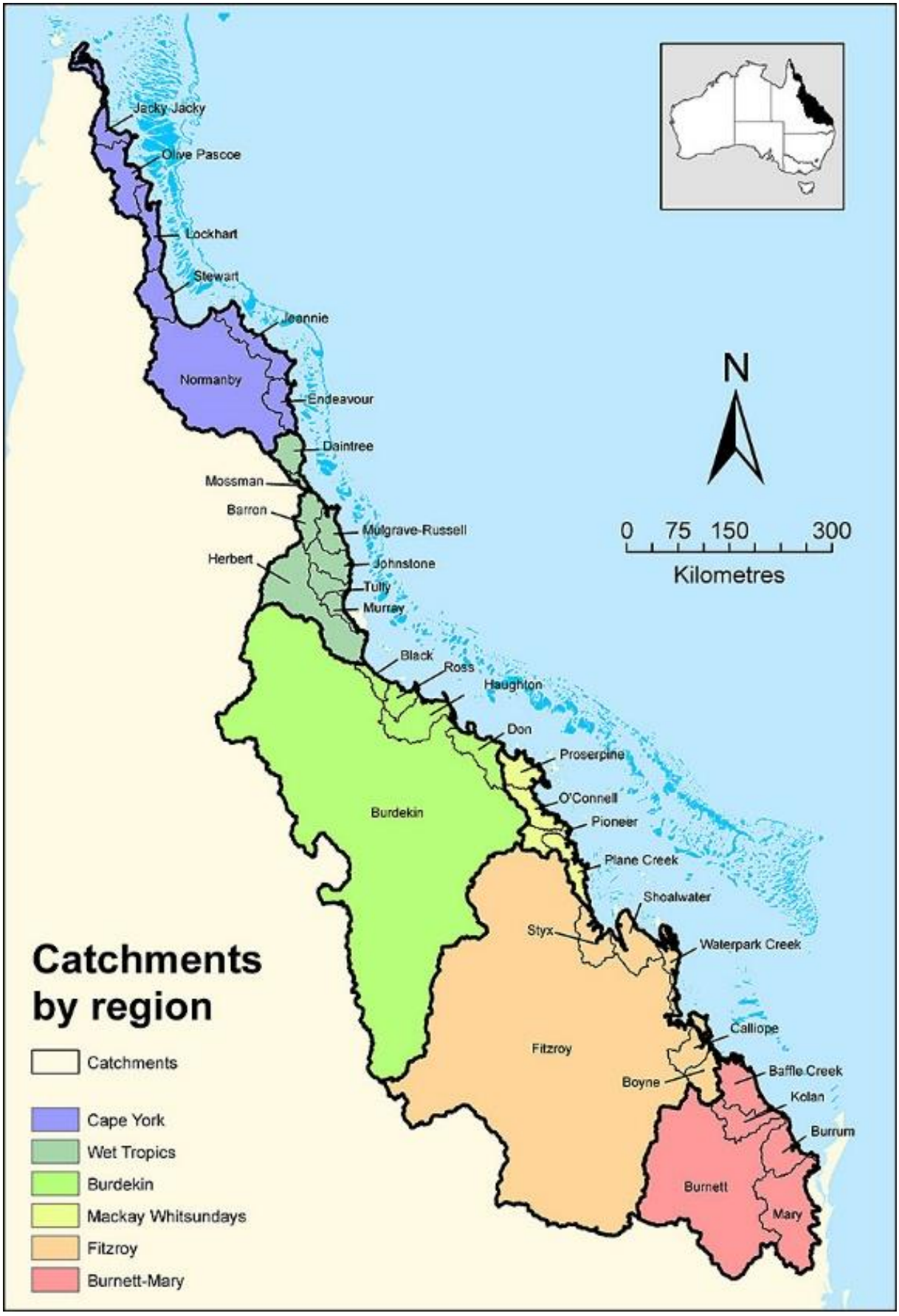

Figure 1. Map of NRM regions in the Great Barrier Reef (QLD Gov, 2024)

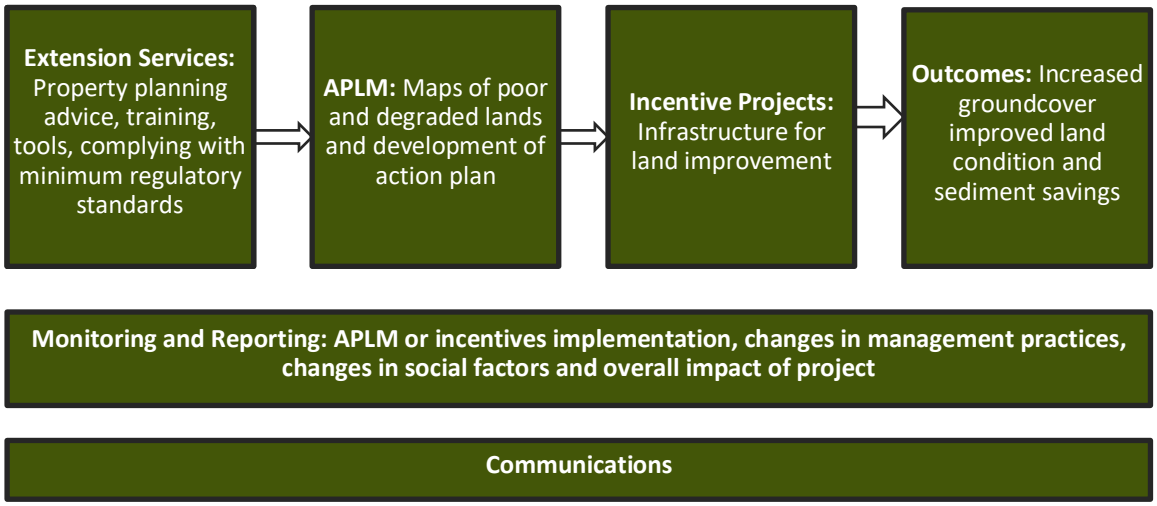

Figure 2. GRASS 1 services

Box 1. Grazing impact on the Great Barrier Reef

Over time, unsustainable and unsuitable grazing practices such as overstocking and poor stock rotation reduce groundcover, including grasses, other vegetation and organic matter. When the groundcover is reduced in an area, the risk of losing vital topsoil to rain events is increased. Topsoil is essential for maintaining pasture productivity, and its retention is critical important to sustainable grazing operations.

In Great Barrier Reef regions, such as the project area of the GRASS program, water runoff carries sediment and nutrients away from properties, through river systems, and eventually to the Great Barrier Reef. Gully and hillslope erosion account for 45 per cent of increased sediment run-off, and 39 per cent from streambank erosion (Queensland Government, 2024). This sediment runoff poses a serious threat to the Reef, a globally recognised natural icon and the world's largest coral ecosystem, listed as one of the most biodiverse World Heritage sites. With graziers collectively managing 31.1 million hectares of land in Great Barrier Reef catchments, changing land practice to decrease sediment run-off, directly contributes to improved Reef water quality.

Erosion is a natural process in Reef catchments but has been exacerbated by human activity such as grazing. This run-off impacts the Reef in a number of ways with very fine sediment remaining suspended in the water column for some time. This can interfere with filter feeding organisms like clams, disrupt coral breeding and development cycles, impact early development of some fish, and reduce light available for the growth of corals and plants (Queensland Government, 2024). Nutrient run-off is also of concern, with fertilisers such as nitrogen and phosphorus being swept away with the sediment, further impacting corals and seagrass. Effective management of groundcover and land condition is vital not only for sustainable grazing but also for protecting the health of the Great Barrier Reef.

The three NRM organisations and DPI (formerly DAF) provide extension services to livestock producers across the Burdekin, Fitzroy and Burnett-Mary regions for the GRASS program. NRM and DPI officers provide technical advice, help develop APLMs, and support graziers in implementing improved land management practices for addressing poor or degraded land. DPI does not administer incentives. Instead, when DPI officers see an opportunity for graziers to receive incentives (example in Box 3), they link graziers to the relevant NRM organisation and may assist in preparing the application, or project managing approved incentive projects. NRM organisations administer the incentives funds, run calls for proposals, undertake an assessment process, and manage contracts with graziers who are successful in receiving any financial incentives. Technical Assessment Panels (TAP) are convened by each NRM

organisations with the purpose of assessing incentive applications, ensuring applications meet the program's criteria and objectives. These panels are made up of NRM staff, independent advisors, and DPI representatives (different from the extension staff).

NRM organisations and DPI capture data on management practice changes and social monitoring outcomes and report it to OGBR&WH and Paddock to Reef (P2R).

Box 2. GRASS 1 Delivery Partners

DPI is well established in Queensland, with long standing relationships with the industry. DPI officers work hand-in-hand with producers on broader issues like droughts, floods, fires and biosecurity challenges with the goal of strengthening primary industries. DPI's activities span extension, education, and training. The GRASS program is just one of many programs DPI delivers.

NQDT is the NRM body for the Burdekin region. This region covers approximately 13,400,000ha with a population of about 240,000. Agriculture dominates the landscape, with beef cattle grazing covering more than 96 per cent of the region's land area (NQDT, 2024). NQDT provides graziers in the area with workshops, trainings, education, as well as access to a number of programs to provide funding for graziers, including the GRASS program.

FBA supports the Fitzroy region, covering approximately 15,600,000ha with a population of approximately 242,500 people (FBA, 2024). This NRM organisation supports the graziers in the area through various activities such as education, training, workshops and one on one extension. GRASS is offered by the FBA alongside a number of other funding programs. While beef production is the main industry in the region, FBA provides support also for grain crop growers, as well as the wider community.

BMRG supports the Burnett-Mary region covering approximately 5,600,000ha with a population of approximately 350,000 people. Cattle grazing represents the largest industry by land use and regional employment (BMRG, 2024). This makes programs such as GRASS, which are focussed on improving graziers' practices, vital for the region. As with the other NRM groups, GRASS is one of several programs BMRG offers its landholders.

Past GRASS 1 review

The outcomes of GRASS 1 were reviewed by DETSI (formerly DES) in 2023. Through this review it was found that the GRASS team successfully delivered the program, meeting and overachieving their targets of: APLMs; on-ground works; in-kind contributions from graziers to leverage the investment from the Queensland Government; and grazier understanding of regulations. The Paddock to Reef program modelled over 20,000 tonnes of sediment load was prevented from going into the Great Barrier Reef (Department of Environment and Science, 2023).

Improvements identified included: enhanced guidelines for program delivery and reporting; inclusion of a check-in process at 18 months with graziers to support ongoing APLM implementation and reporting; as well as improved project management tools to improve reporting and financial tracking.

Box 3. Example of GRASS 1 incentive project

Graziers are offered monetary incentives from the Queensland Government, as co-investments in projects that will reduce runoff from the property. The funding is provided in line with guidelines and is dependent on type of works and extent of public/private benefit. The funding was capped at $12,000 per project in GRASS 1.

An example of an incentive project from 2020, which was discussed during a property visit with a GRASS 1 participant in this evaluation, is included below (Figure 3). This gully restoration project was commenced to: prevent further erosion from occurring; repair the existing eroded site; and fence and seed the affected area to allow for the regeneration of grasses to reduce the effects of erosion. Funding was sought from the GRASS 1 program via BMRG to undertake the project, during which the erosion site was assessed, strategies were discussed and a plan was implemented.

Figure 3. Area of erosion identified for an APLM (left) and after works (right)

Two years after the works took place, erosion had ceased at the head of the gully, substantial grass cover had prevented further erosion, and the paddock had been rested to allow for regeneration of native and introduced pasture grasses.

3.2 Purpose and scope of this 2025 review

This report is a **legacy evaluation** to address the knowledge gaps of GRASS 1 and identify the impacts of GRASS 1 on sustained improvements in land management. By speaking to GRASS 1 graziers who developed action plans for land management (APLMs), some of whom went on to access incentives for on-ground works, the legacy review evaluates:

- The extent to which the APLMs were useful and helped graziers improve their business while continuing to support land management improvements in the short, medium, and long term;
- The motivations, barriers, and opportunities for graziers to maintain or continue to improve best practices in land management;
- The effectiveness of the incentives for on-ground works and the extent to which the improvements have been sustained, including graziers' ability to maintain the infrastructure supported by the incentives, and the longer-term impacts (positive or negative) of the incentive projects;
- Any spill-over effects, that is, any other benefits that are realised beyond the project's direct influence (e.g., regulatory compliance, other actions to improve water quality, build capacity , strengthen social connections, support access to other funding, increase knowledge, etc.); and

- Any additional support needed for GRASS 2 graziers to implement enduring land management change, which will provide valuable information for program managers to make adjustments as GRASS 2 enters its second term.

In addition, the report aims to:

- Inform project partners on the longer-term benefits that GRASS 1 has had;
- Identify any opportunities for improving long-term benefits that could inform the GRASS 2 program; and
- Establish an understanding of the level of awareness of requirements for compliance with Reef regulations and industry standards.

3.3 Review methodology

Key Evaluation Questions

This review addresses the following Key Evaluation Questions (KEQs):

KEQ 1. What evidence is there that the project has contributed towards Reef 2050 Water Quality Improvement Plan (WQIP) land management and water quality targets?[1]

KEQ 2. What progress would have been made anyway, in the absence of the Queensland Reef Water Quality Program (QRWQP) funding this project?

KEQ 3. What, if any, unanticipated positive or negative impacts have resulted from the project?

KEQ 4. What are the long-term benefits to this project? What evidence is there to say this?

These KEQs have been aligned with sub-questions and indicators to support a robust approach to addressing the KEQs (see Appendix A).

Grazier data collection (property visits, interviews, and survey)

Evaluation participants were selected randomly from the delivery partners' APLM and incentive lists. Delivery partners then made initial contact with the graziers selected to determine whether they would be willing to participate in a property visit or an interview. Graziers could either participate in a property visit, or an interview, not both. Once graziers had agreed to either a property visit or an interview, their contact details were passed onto the Mosaic Insights research team for interview times to be arranged via phone calls and emails. Invites to participate in an online survey were also sent to 385 of the 449 GRASS 1 participants (86%).

The data was collected during the following periods:

- Property visits were conducted between 28th October and 15th November 2024;
- Interviews took place between 28th October 2024 and 17th January 2025, via phone or online video calls; and
- The survey was open from 15th January to 16th February 2025.

There were challenges in arranging meeting times for the property visits and interviews due to extensive works some graziers were undertaking leading into the wet season. Nevertheless, the planned number of interviews and property visits were met in almost every region.

Delivery partners provided all GRASS 1 participants who agreed to be contacted by Mosaic Insights with an information sheet which requested consent for additional information to be provided by delivery partners to the Mosaic Insights research team, in the form of P2R management practice survey

[1] Targets can be explored here: https://www.reefplan.qld.gov.au/water-quality-and-the-reef/the-plan/targets

data, social survey (PoP) data, and information of the type of management practice undertaken in incentive projects (where relevant).

Property visits

Rod Kerr, a Sustainable Agriculture Consultant since 2013, conducted a total of eighteen GRASS 1 property visits comprised of six in the Burnett Mary region, six in the Fitzroy region, and six in the Burdekin region. These visits met the proposed quota of two visits with DPI supported properties (one incentive and one non-incentive) and four visits with NRM supported properties (two incentives and two non-incentives) in all regions (Table 1). It should be noted that two of these graziers (one each from Fitzroy and Burnett Mary) participated in both GRASS 1 and GRASS 2. These graziers were asked questions for both phases of GRASS and will be double counted (i.e. they will be reported in this report and in the GRASS 2 mid-term evaluation report). This occurred as a result of not receiving the full details of these graziers' NRM project histories, prior to when their interviews were booked.

Table 1. GRASS 1 property visit sample size targets

Region	DPI		NRM		Targets achieved?	Notes
Incentive project?	Yes	No	Yes	No	Yes/No	
Burdekin	1	1	2	2	Yes	-
Fitzroy	1	1	2	2	Yes	One FBA non-incentive identified as also participating in GRASS 2
Burnett Mary	1	1	2	2	Yes	One BMRG incentive identified as also participating in GRASS 2

Rod made three separate trips, visiting the Burnett Mary region from 28 October to 1 November 2024, Fitzroy from 4 – 8 November 2024, and Burdekin from 11 – 15 November 2024. All property visits for GRASS 1 and GRASS 2 evaluations were conducted during these trips.

While on site Rod had informal conversations with graziers and also conducted a short, structured survey to inform the legacy evaluation. The survey used during the property visits is included in Appendix B. In addition to questions about graziers' experiences with the GRASS Program, the standard grazing P2R questions were asked to capture graziers' perceptions of their land management practices. Responses to questions were uploaded into a database for analysis. Results of the P2R questions asked during the property visits are summarised in Appendix E.

Interviews

In this task, thirty-two GRASS 1 graziers were interviewed. These were different landholders to those who were visited on their property to minimise burden on graziers, avoid duplication of data, and ensure a wide sample of feedback was received on the program.

As with the property visits, efforts were made to meet the proposed grazier interview quota of four interviews with DPI supported properties and eight interviews with NRM supported properties for each region, however, delays in receiving contact details and scheduling issues leading into the Christmas period resulted in some regions' quotas not being met (

Table 2). In total, there were:

- three interviews with DPI supported graziers (two incentive and one non-incentive) and five interviews with BMRG supported graziers (four incentives and one non-incentive) for the Burnett Mary region;
- four interviews with DPI supported graziers (two incentives and two non-incentives) and eight interviews with FBA supported graziers (four incentives and four non-incentives) or the Fitzroy region; and

- three interviews with DPI graziers (two incentives and two non-incentives) and eight interviews with NQDT supported graziers (four incentives and four non-incentives) for the Burdekin region.

The semi-structured interview guide used for these grazier interviews is included in Appendix C.

Table 2. GRASS 1 grazier interview sample size targets

Region	DPI		NRM		Targets achieved?	Notes
Incentive project?*	Yes	No	Yes	No	Yes/No	
Burdekin	2	2	4	4	Yes	-
Fitzroy	2	2	4	4	Yes	-
Burnett Mary	2	2	4	4	No	Could not get 1x DPI non-incentive, 3x BMRG non-incentive

Survey

In collaboration with OGBR&WH and the Project Steering Committee, a short (~10 minute) online survey was developed for delivery to graziers who participated in the GRASS 1 program. The survey was included in this evaluation to enable the collection of additional data from graziers who had not participated in the interviews. It was designed to complement interview questions and utilised relevant PoP survey questions. The survey focussed on the APLMs in terms of their usefulness, enduring effectiveness, unintended consequences, and compliance. The survey also captured some respondent characteristics (e.g., demographics, basic property details, and other information about their GRASS participation). These characteristics are reported below, with the main results presented in the Review Findings section. The survey was programmed in an online survey platform, Qualtrics, and did not collect any personal details that could identify the person who responded.

The survey was sent by the delivery partners to 385 GRASS 1 participants (86% of all participants) (Table 3). A question was included to identify any graziers who had already participated in either a property visit or an interview as part of this evaluation.

Table 3. Number of GRASS 1 participants invited to complete online survey

Delivery partner	Region	APLMs completed (total no. participants)	No. survey invites delivered
NQDT	Burdekin	80	57
FBA	Fitzroy	110	123
BMRG	Burnett Mary	55	27
DPI	Burdekin, Fitzroy & Burnett Mary	204	178
TOTAL		**449**	**385**

A copy of the survey questionnaire and email invitation are included in Appendix D.

Survey respondent demographics

The survey received 51 responses (13% response rate), however five of these were incomplete and were therefore removed from analysis. As such, 46 responses (12% response rate) were included in this analysis (**Error! Reference source not found.**).

Most of the responses were from GRASS 1 participants who had not yet participated in this evaluation (n=35), as well as one grazier who had a property visit, and eight graziers who had been interviewed. Two graziers were unsure whether they had provided feedback during a property visit or interview.

Nearly half of the respondents (48%, n=22) worked with DPI on the GRASS 1 program (16 in Fitzroy, 4 in Burnett Mary, and 2 in Burdekin) (Figure 4). More than one third (37%, n=17) worked with NQDT, just

over one tenth (11%, n=5) worked with FBA, and two graziers worked with BMRG. Four respondents noted they were currently participating in the GRASS 2 Program[2], while nine respondents were unsure if they were participating in GRASS 2.

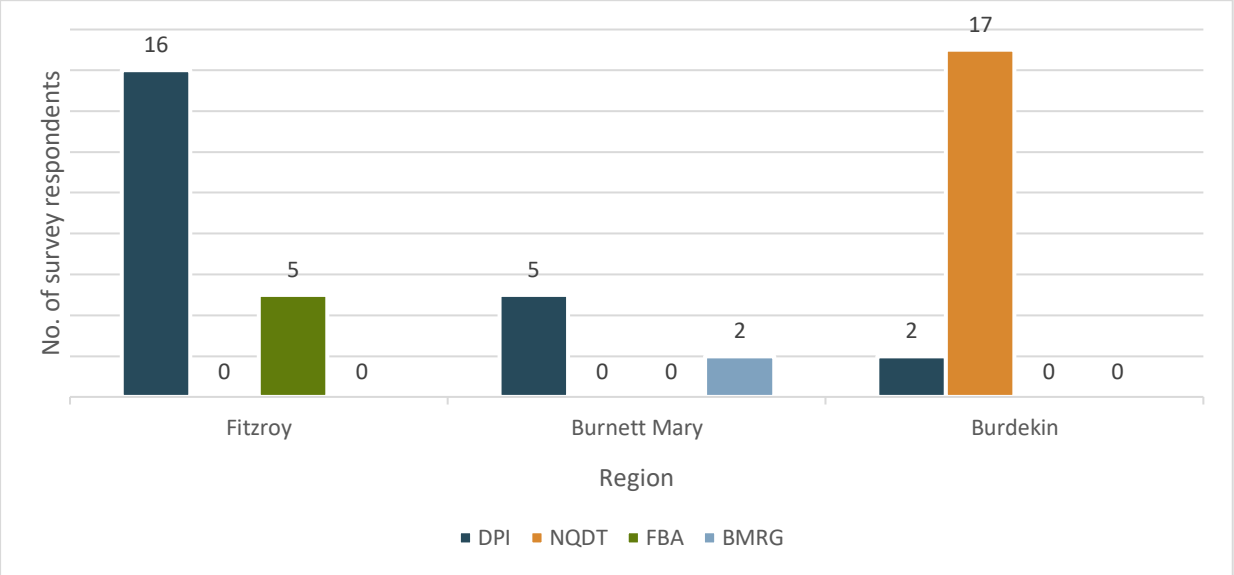

Figure 4. Number of responses, by region and delivery partner (survey data, n=46)

The largest proportion of respondents had properties in the Fitzroy region (46%, n = 21), followed by Burdekin (41%, n=19), and Burnett Mary (13%, n=6) regions.

Roughly one third of the respondents were aged 55-64 years (33%, n=15), just over one quarter were 35-44 years (26%, n=12), nine respondents were 45-54 years (20%), five respondents were 65-74 years (11%), three respondents were 75 years or over (5%), and one respondent was aged 25-34 years (2%) (Figure 5).

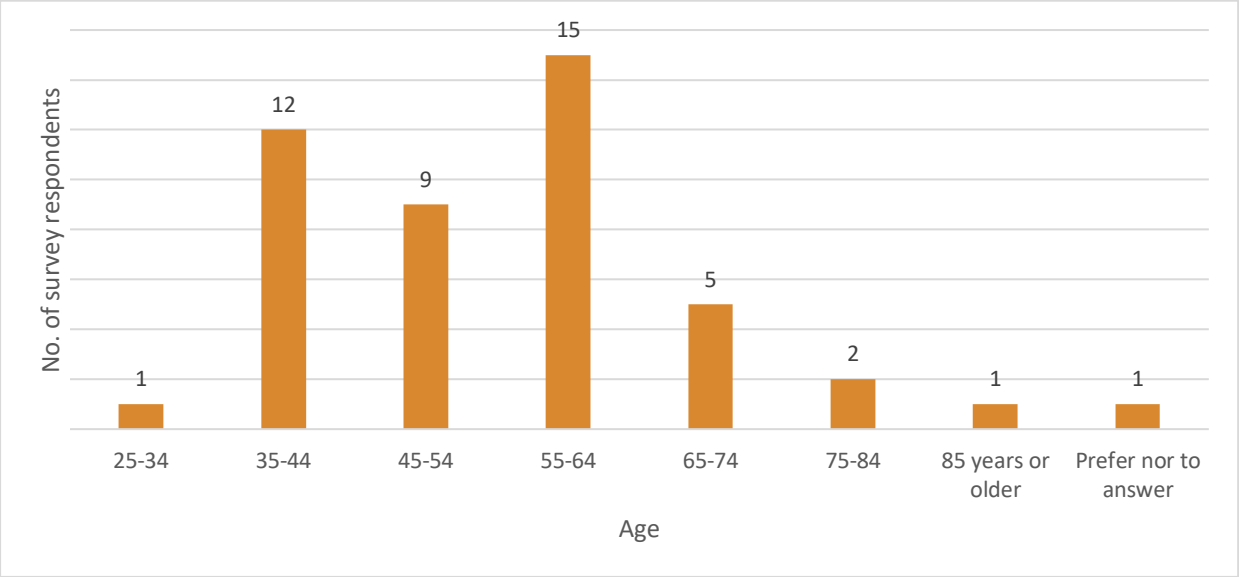

Figure 5. Respondents' age (survey data, n=46)

The majority of the respondents had been in the agricultural industry for 21-50 years (74%, n=34): 28% (n=14) had been in the industry for 31-40 years, 24% (n=11) for 41-50 years, and 22% (n=10) for 21-30

[2] In some cases, graziers had signed up for GRASS 1, then continued in GRASS 2. Some had signed up near the end of the GRASS 1 phase and had not yet had the opportunity to complete an APLM or access incentive funding.

years). A small proportion of respondents had been in the agricultural industry for greater than 50 years (9%, n=4) and 17% (n=8) for 1-20 years (Figure 6). More men (61%, n=28) than women (39%, n=18) responded to the survey.

Only one person identified as being of Aboriginal and/or Torres Strait Islander origin and two preferred not to answer.

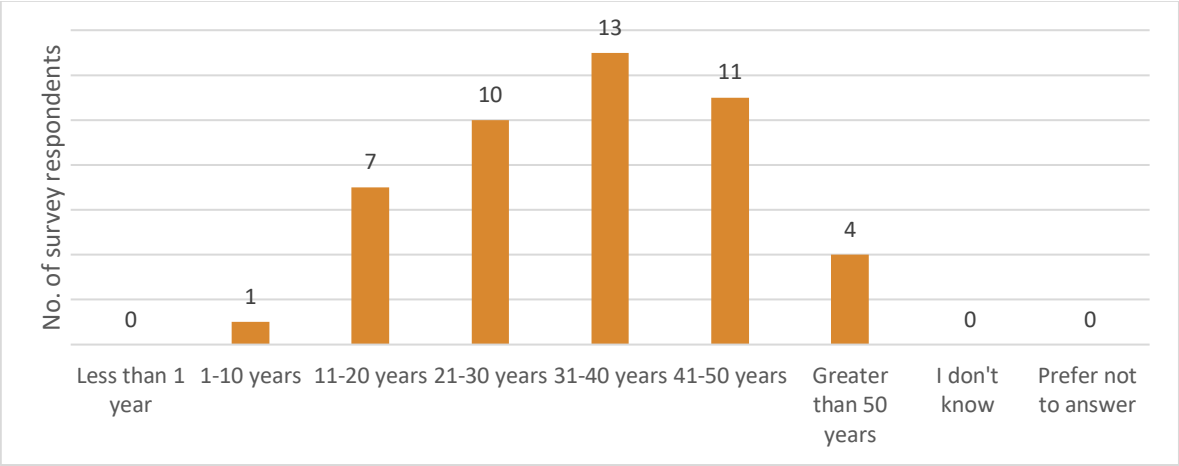

Figure 6. Number of years respondents have been in the agricultural industry (survey data, n=46)

Survey respondents reported various levels of education (Figure 7). More than one third had undergraduate degrees (35%, n=16) and roughly one fifth had some type of certificate (22%, n =10). Six respondents had only completed school to year 10 or below, one to year 11, and four to year 12. Of those that had completed some form of tertiary education (i.e. either industry specific training, some level of certificate, undergraduate degree, or postgraduate degree), most had studied in agriculture or related fields (45%, n=15), followed by science or a related field (12%, n=4).

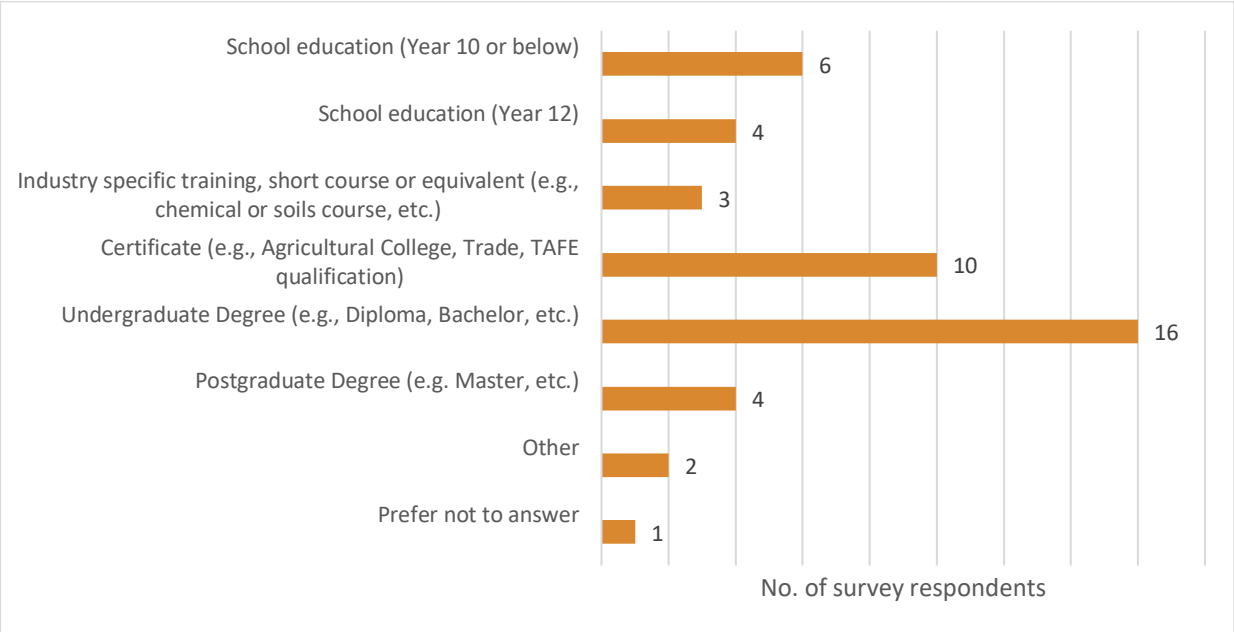

Figure 7. Highest level of education completed by respondents (survey data, n=46)

More than half of the respondents indicated that their involvement in the GRASS 1 program included receiving funding for an incentive project (54%, n=25) while nearly one third were certain they had not (30%, n=14) (Figure 8). A small proportion of respondents noted that they received funding for land improvement work around the time their APLM was developed, but were unsure which program provided the funds (15%, n=7).

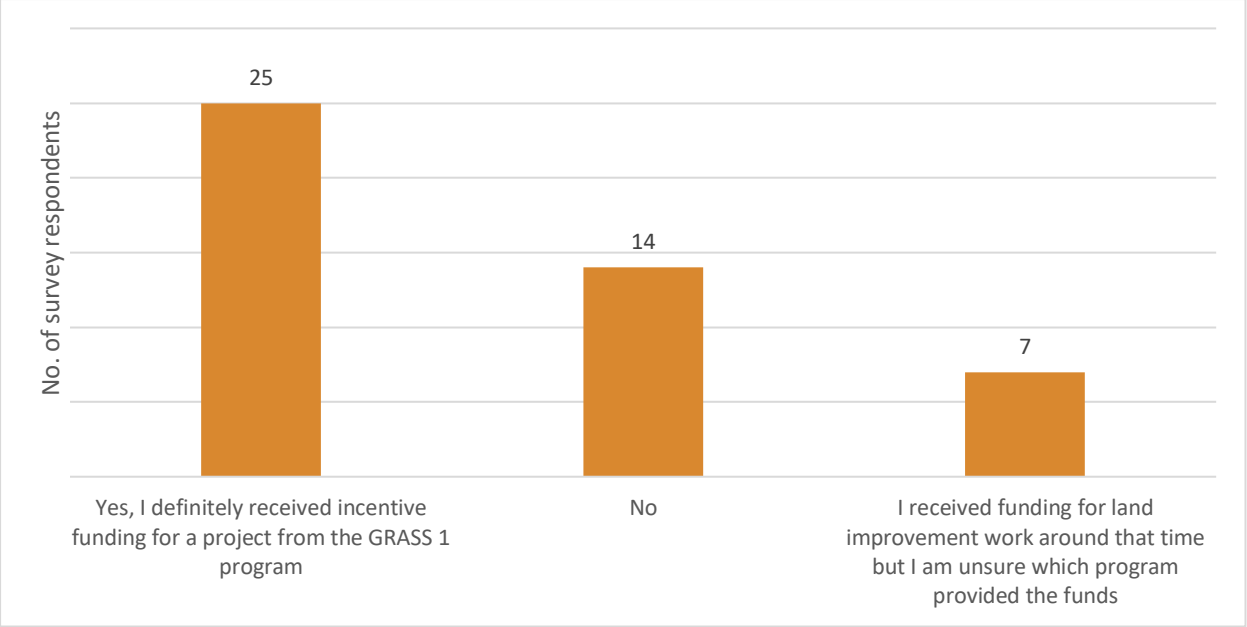

Figure 8. Respondents' recollection of receiving incentive funding during participation in the GRASS 1 program (survey data, n=46)

Data preparation and analysis

All interviews were recorded (with consent from participants) and transcribed in preparation for analysis. All information was de-identified, and the recordings will be deleted from the Mosaic Insights data storage system once the project is complete. The transcripts were loaded into NVivo, a software package to assist in thematic analysis of qualitative data and a coding frame was constructed to align with the relevant KEQs. Interviews were thematically analysed using a deductive approach, with the responses assigned to the prescribed codes. During analysis additional codes were created to capture new themes or insights that emerged from the interviews, using an inductive approach. This process ensured that all relevant information was comprehensively captured. Once all the interviews were coded, the data was then systematically analysed to identify key themes within each KEQ. A summary was then written, which included quotes to further illustrate participants' perspectives.

Data from the property visits was analysed in two ways. The property visit survey questions were mapped to the KEQ sub questions, and the record of the conversation was thematically coded to align with the relevant KEQs.

Data analysis for the grazier survey comprised basic descriptive statistics such as counts, percentages, means (average) and standard deviations (variation), and the thematic coding of open-ended responses. All results are presented in aggregate, and no individuals will be able to be identified in any reporting.

4 Review findings

4.1 KEQ1. What evidence is there that the program has contributed towards Reef 2050 WQIP land management and water quality targets?

Key findings

The GRASS 1 program has significantly contributed to the Reef 2050 WQIP targets by implementing APLM practices on over 2.92 million hectares of grazing land, including 720,890 hectares of poor and degraded land. Property visits to 18 farms showed that:

- 17 out of 18 continued to implement land management practices undertaken during involvement in GRASS; and
- 17 out of 18 were achieving the best water quality risk rating (A).

Land managers demonstrated high levels of knowledge and motivation, with most properties in good condition and measures in place for improvement. The program's influence is evident in the continued implementation of sustainable land management practices among graziers.

Sub-question: What area of land has GRASS 1 influenced the management of?

Indicator: Ha of land managed through APLMs

According to the final report on the GRASS 1 program, APLMs were developed for over 2.92 million hectares of grazing land, with the aim of enhancing the management of 720,890 hectares of poor and degraded land (Department of Environment and Science, 2023).

Sub-question: To what extent is there on-ground evidence that graziers involved in GRASS 1 are continuing to implement land management that aligns with industry standards?

Indicator: Evidence of adoption of actions to meet industry standards and Reef regulation minimum standards

Data source: Property visits: sighting of on-ground evidence during property visits. P2R survey questions used to record evidence of practice changes

With the exception of one property, all of the properties visited (of which half had accessed incentive funding for projects through the GRASS 1 program), continued to implement land management practices that align with industry standards and best practice. For example, land was conservatively stocked, erosion was being addressed by excluding cattle from eroded areas and riparian zones, fencing to divide paddocks was installed, watering points for cattle had been added in paddocks further from water sources, forage budgeting was used, and paddocks were being rotationally grazed. Conversations with land managers indicated that they were knowledgeable and motivated to manage their properties using improved land management practices. Several commented on their intention to improve their land management practices while continuing to run an efficient business.

Most of the properties visited were in good condition based on the findings from the visit. A few were not, though these had only recently changed hands and new management had already begun implementing improvements. The only exception was a property still operating under traditional grazing practices, where managers demonstrated limited management knowledge, though the land

itself was in reasonable condition. Given that land condition shifts slowly, often over many years or even decades, the good condition observed across most properties cannot be attributed solely to the GRASS 1 program.

Of the properties visited, 17 out of the 18 had an overall water quality risk rating of A (the best rating) as calculated by P2R WQ frameworks. One property had risk rating B (see Appendix E).

Property visits, conversations with landholders, and P2R management questions showed that most of the graziers visited were already using progressive land management practices and were considered to be performing well compared to others. When they joined the program, they were seen as "early adopters" because their practices were already above the minimum standards set by the Reef regulations. This raises the question of whether this cohort of landholders were the intended target of the GRASS program. The program was intended to focus on supporting graziers that were having trouble in meeting regulatory requirements and were therefore at the lower end of the management spectrum.

Fifteen of the eighteen properties visited received incentives of some kind (whether from GRASS or other sources[3]). The combined effect of some graziers' misattribution of the source of their funding, and the relatively small sample size, makes it difficult to isolate the effects of the APLMs, in the absence of incentives. Of the three properties who had not received funding and were relying solely on their APLM, two were being managed in line with industry standards or better, while one was not. This was the only property that was observed to not have good land management practices.

The landholders of these three properties (with APLMs, but no funding) thought that their APLMs increased their awareness of land management issues and the actions they could take to address them. They reported learning how to improve pastures and taking on-ground actions as a result (e.g. reseeding, fertilising), blocking cattle access to eroded areas, and improving pasture utilisation. Furthermore, they all reported continuing to implement these actions after completion of the GRASS program. One property saw no limitations to them following their APLM actions to completion, however the two others mentioned old age, time, and financial capital as limiting factors.

[3] As discussed further below in some of the interview findings, many graziers who had received government funding for on-ground works were unsure if they were funded via the GRASS program or other programs. This was often due to the way in which graziers are supported by delivery partners, who are driven to focus on the outcomes for graziers and consequently may engage the graziers in more than one program at a time. Despite graziers receiving information prior to their property visit for this evaluation, which explained the focus on the GRASS program, some graziers who had only completed an APLM (but no incentive project) spoke to Rod Kerr about the co-funded works on the property and thought the funding came from GRASS. Therefore, the findings about incentive projects relate to only those who were recorded by delivery partners as having received GRASS funding (unless noted otherwise).

4.2 KEQ2. What progress would have been made anyway, in the absence of the QRWQP funding the GRASS program?

Key findings

Findings from interviews with graziers suggest that while many participants believed they would have made progress anyway, the GRASS 1 project significantly accelerated the speed and success of their land management improvements. Similarly, survey data indicated that most respondents were likely to have made land improvement progress in the absence of the project.

Participants noted how the GRASS 1 program enabled them to make progress through different mechanisms, for example, by: funding land improvement works, gaining knowledge about land improvement practices, providing time to undertake land management improvements, and demonstrating land management benefits.

Sub-question: To what extent do graziers agree that they would have improved land management in the absence of the GRASS 1 program?

Indicator: The extent to which graziers agree that they would have improved land management without the program
Data source: Interviews

Interviewed graziers were asked *How likely is it that you would have improved your land management without participating in the GRASS 1 Program?* While the majority of graziers interviewed said it was likely that they would have improved land management in the absence of the GRASS 1 program, almost all of them mentioned the benefits the program in some way (Figure 9, 'agree' shown in dark orange). The most predominant outcomes mentioned were the speed in which improvements were achieved and the outstanding success of these land management improvements. In contrast, a minority of graziers said they would not have made any improvements without the GRASS 1 program (i.e., 'disagree', shown in light orange in Figure 9). These graziers cited reasons such as lack of money, lack of knowledge, lack of opportunity/time, and other landowners' resistance, all of which the program was perceived to help overcome. These findings are explained in further detail below.

Figure 9. Whether graziers agree they would have undertaken land improvements without GRASS 1 program
Note: number of interviewees are shown at the end of each theme

Graziers who highlighted the value of the program in accelerating change primarily linked this to the availability of funding. Three of the graziers said they would not have done any land improvements at all simply because they did not have financial resources to do so. Of the thirteen graziers who said they would likely have done improvements anyway, seven of these linked the speed of change directly to the funding which was made available through the program. The remaining six graziers who mentioned this benefit spoke more generally about the program assisting them in creating plans, obtaining advice, and gaining knowledge about effective land management improvements. In some cases, these benefits allowed them to accelerate their implementation timeline from decades to just a few years.

> *"What the GRASS program has allowed us to do is to kick on and do things that may have taken us 20 or 30 years to implement... We've been able to sort of get in and do it in five." (ID3)*

A second group of graziers indicated they would have made improvements, but these would have been less effective or comprehensive without the program's support. The particular role of the extension staff in providing information and support to enable these successful outcomes was noted by many participants. In these instances, the GRASS 1 program provided additional expertise, planning capabilities, and resources that enhanced the quality and scope of their land management efforts.

> *"The project would have happened off our own bat originally, but certainly not to the scale and or probably the effectiveness that it did happen through the GRASS project." (ID23)*

A smaller group of graziers indicated they would not have made improvements without the GRASS 1 program, citing barriers such as lack of financial resources, knowledge gaps, and limited capacity.

. In one case a grazier noted resistance from their father, noting that:

> *"In the rural industry, the older generation are pretty conservative with what they do and how they approach modern day techniques and processes. It has been a bit of a journey – especially for my father – to bring him along." (ID15)*

This sentiment was echoed by another landowner, highlighting how the program allowed them to bring other landowners along with them on the practice change journey:

> *"Everyone's set in their ways, like, "this is what we've always done, it's what my father's done, what my grandfather's done". But [it's important to] get the message out there [to] change your management practice….if people can be incentivised to change their management practices… I really, really applaud that…. We had a field day [and] the neighbours got to see what [had changed]. It's still very hard to change people's mindsets, but people were interested." (ID26)*

As a result, for this smaller group of participants, the program was essential in enabling any land management improvements at all.

> *"We did not have the money to be able to do it, and we did not have the skill. We knew we wanted to...[but] if we didn't have the funding and the support, we would still be working on cutting the paddocks up." (ID2)*

Data source: Survey

Survey respondents were asked how likely it is that they would have changed their land management without participating in the GRASS 1 Program. Although two respondents noted that it was 'not at all likely', the rest of the respondents (96%, n=44) identified some level of likelihood that they would have changed their land management practices (Figure 10).

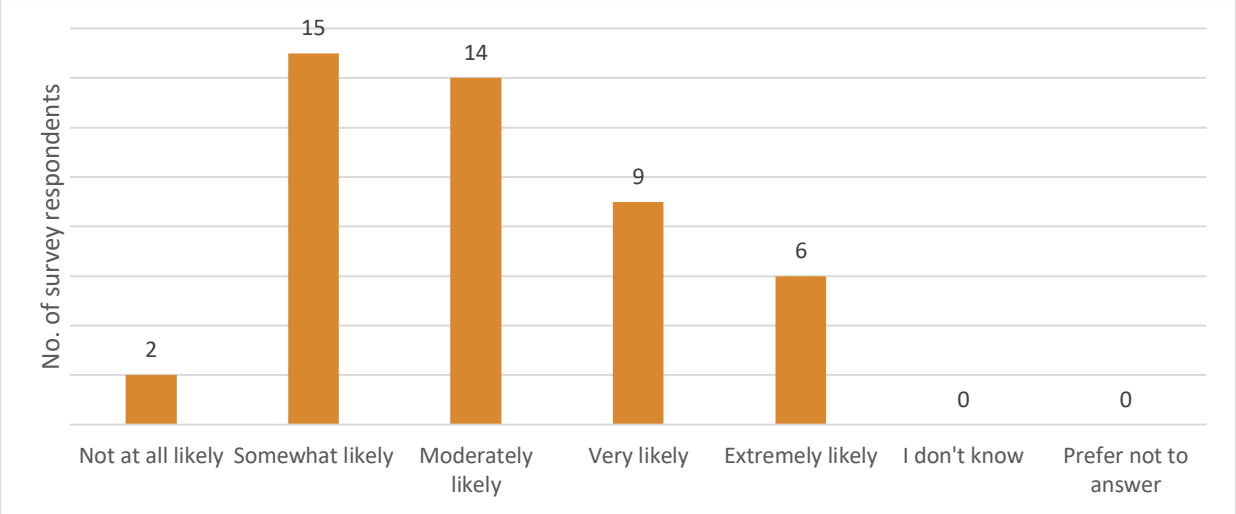

Figure 10. Likelihood of respondents changing their land management without participating in GRASS 1

4.3 KEQ3. What, if any, unanticipated positive or negative impacts have resulted from the program?

Key findings

Findings from interviews with graziers indicate that most of them did not experience unanticipated outcomes from their participation in the program. However, those who did report unexpected outcomes noted overwhelmingly positive impacts. Seven graziers were surprised by the speed and effectiveness of landscape recovery, which exceeded their expectations and motivated them to accelerate other improvement projects.

Additional benefits included increased networking opportunities, reduced maintenance needs, and access to valuable expert advice. Overall, the unanticipated impacts were largely positive, enhancing the program's effectiveness and graziers' motivation to commence other land management practice improvements.

Sub-question: Did graziers notice any unexpected outcomes (positive or negative) as a result their participation in the program?

Indicators: Grazier insights on unexpected outcomes

Data source: Interviews

The majority of the graziers interviewed reported no unanticipated outcomes from their participation. Of those who did notice unexpected outcomes several mentioned how fast or how good the outcomes were. In these cases, the outcomes well exceeded the graziers' initial expectations. A smaller number of graziers also noted benefits like networking opportunities, reduced maintenance needs, and the value of expert advice (Figure 11).

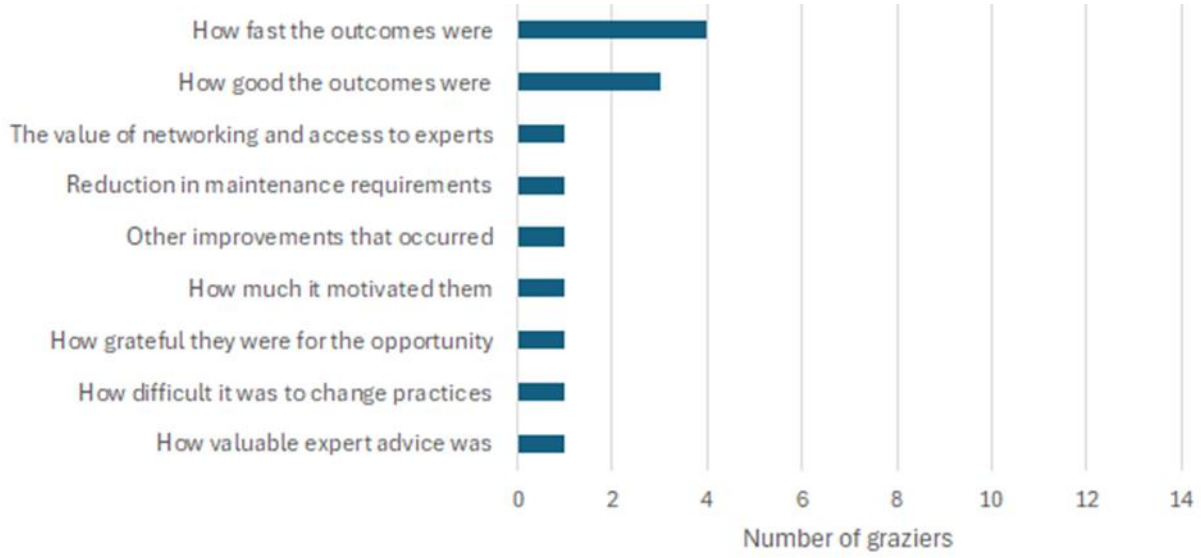

Figure 11. Unexpected outcomes identified in interviews with graziers (some graziers identified more than one outcome)

While most graziers did not experience unexpected outcomes, those that did, reported these outcomes to be overwhelmingly positive. They primarily related to the speed and effectiveness of landscape recovery. Graziers expressed amazement at how quickly their land responded to new management practices, which in turn motivated them to accelerate other improvement projects.[4]

> *"We were amazed how quickly the country regenerated, which … was a bit of a surprise. We thought it would take it a lot longer... But … immediately [after] we had removed the livestock and it started raining, we could see it [the country] was responsive." (ID21)*

Only one participant highlighted a significant challenge as an unexpected outcome, specifically regarding the difficulty of maintaining new practices during challenging times. However, this same participant noted that while they had not expected the project implementation phase to initially be so challenging, it became easier over time, as they saw improvements in their land condition.

> *"Well, the negative is with things we've done over time, trying to stick with things isn't always easy... when you got droughts and that, you just weren't ready for when we had, like coming into a drought … you're just a bit too quick cause your pastures weren't quite as good." (ID5)*

[4] It is noted that while graziers spoken to in this evaluation contributed the quick regeneration of land to their participation in the GRASS program, the impact of land management changes may also be reliant on a good rainfall season and several other uncontrollable factors.

4.4 KEQ4. What are the long-term benefits to this project? What evidence is there to say this?

Key findings

The GRASS 1 Program delivered substantial long-term benefits with clear evidence of sustained positive outcomes. Property data, interviews, and surveys consistently demonstrated improved land condition and enhanced productivity, with graziers reporting increased carrying capacity while maintaining or improving land health. Other long-term benefits from participation were:

- Enhanced property value through better pasture, infrastructure, and water availability
- Increased business resilience though reduced operational costs, particularly in supplementary feeding and maintenance.
- Increased infrastructure facilities enabled through the incentive projects.
- Widespread adoption of sustainable practices, with all surveyed properties showing continuous improvement and many graziers expanding practices beyond their initial project scope.
- Increased confidence in land management reported by 85% of survey respondents.
- Clarity around Reef Regulations, with only 3 interviewed graziers indicating they didn't know or were unsure about their Reef Regulation compliance status.

Graziers noted that the GRASS 1 program's long-term benefits were facilitated by 'wrap-around' support from extension staff, rapid visible land improvements evidenced by clear water runoff and improved ground cover, and increased grazier confidence to expand improvements beyond the initial project scope. However, some of these long-term benefits may be impeded by financial constraints including rising material costs and limited contractor availability. Nonetheless, interview and survey data indicated that the comprehensive support model delivered in the GRASS 1 program created sustained practice change, with participants motivated to maintain and expand improvements when resources permit.

Survey data also showed that productivity improvement and environmental stewardship were the primary motivations for participation in the GRASS 1 program. This suggests the program was aligned with graziers' intrinsic motivations while also providing financial assistance to achieve some of their practice goals. Interview findings showing that participating graziers have continued to implement land management practices after completion of their projects suggests that it is likely that land management improvements will continue in the future as a result of this program.

Sub-question: To what extent do graziers agree that APLMs have been useful for improving their business and supporting their land management improvements?

This question relates to two distinct areas of improvement: business and land management. Consequently, additional sub-questions were created to determine the nature and extent to which the APLMs have been helpful in these two aspects of livestock production.

Sub-question: To what extent have APLMs helped graziers improve their business?

Indicator: The extent to which graziers agree that the APLM has helped them improve their business

Data source: Interviews

The majority of graziers believed that the APLMs had helped them improve their business, although six) noted how difficult it is to measure this improvement, in practice. These graziers also noted that land

management improvements take time to flow through to business benefits. Furthermore, two graziers acknowledged how factors outside of their control can also influence business outcomes but added that this did not negate the value of undertaking land management practices through the GRASS 1 program, in any way.

> *"I'm not claiming any economic benefit at this point. [However], it's manifestly obvious that it will flow just because of the enhancement of the past year. But I'm not claiming it at this point. Everything is so variable in this environment, [but] we will be better off. I feel 100% comfortable about that and not only [because] we're preventing economic deterioration, but [because] we're enhancing it and opening the door for better things to come." (ID7)*

Six of the thirty-two interviewees felt that the APLM had not helped improve their business, however this was not seen as a negative outcome of their involvement in the GRASS 1 program. Instead, it was just a consequence of the long-term and complex factors that can influence grazing businesses in variable environmental conditions.

> *"Has it helped improve the business? Not really in a financial sense, but it has helped land management for long term benefit." (ID6)*

Some graziers also noted how business improvements depended on multiple factors, which often require long-term planning and management. While they found the APLM helpful, they believed that it's full impact would not likely be seen for many years.

> *"Nothing wrong with the suggestions. They're good suggestions, and they did suggest you know, planning species and legumes and that sort of stuff. The limiting factor for me, of course, is the money and the resources with those things, that's sort of an end goal. At the end of the five years, I might be at a point where I could do some of that. There's a lot of other stuff got to happen first." (ID31)*

Data source: Survey

All survey respondents, with the exception of two (one 'not at all' and one 'other comment'), acknowledged that the APLM provided some level of help in improving their business (Figure 12). Of the three respondents who selected 'other', one thought that the APLM assisted them in monitoring results and improvements, while another noted that the APLM solidified what they were already doing. The final respondent was unsure of how helpful the APLM had been, as they could not recall what information was in their APLM.

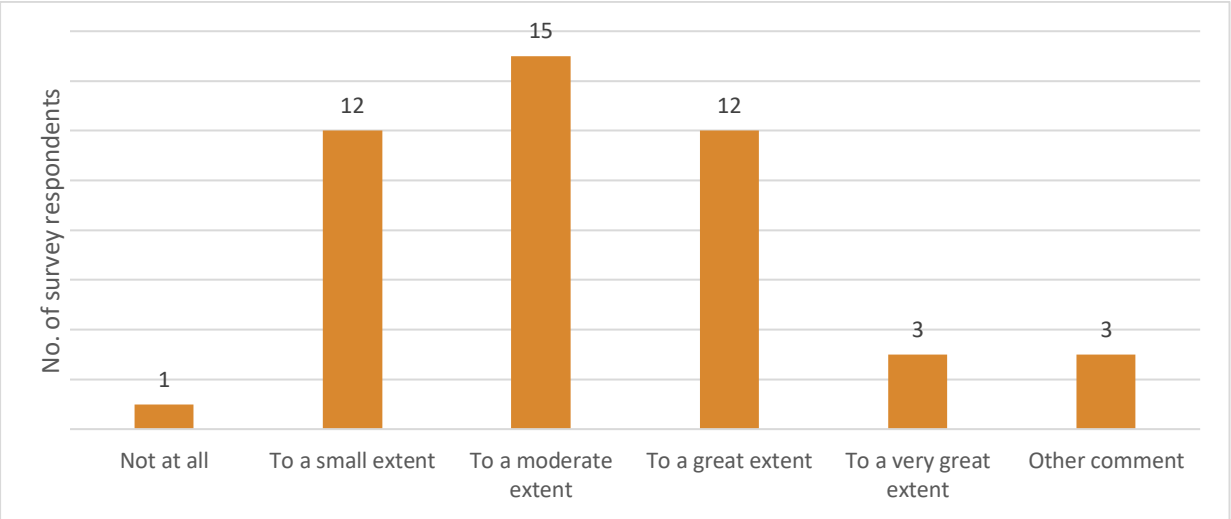

Figure 12. Extent to which APLM helped respondents improve their business (survey data, n=46)

Sub-question: How have APLMs helped graziers improve their business?

Indicator: Grazier insights on how APLMs have helped their business $$ values

Data source: Interviews

The most frequently cited business benefits were property or infrastructure improvements resulting from participation in the GRASS 1 program, as well as an increase in the carrying capacity and related productivity of their properties (Figure 13).

Figure 13. Business benefits resulting from participation in the GRASS 1 program (interview data)

Seven of the thirty-two interviewed graziers noted how the GRASS 1 program had helped enhance their property value through improved pasture, new infrastructure, increased water availability, and other outcomes such as better erosion control. They spoke about these benefits in general terms rather than specifically tying them back to exact activities arising from program funding or their APLMs. However, they noted that without the GRASS 1 program, they would not have been likely to experience these improvements. For some graziers these improvements translated into increased property value, although they did not specifically explain how this had occurred.

> *"I think it's been a really positive program and everyone I know that's been involved has been very happy with it. It certainly has improved our property and added value to our property." (ID10)*

Graziers also noted how improved pastures and practices such as rotational grazing directly enhanced their productivity by increasing the carrying capacity of their land, enabling them to run more cattle on their land.

> *"By implementing those things... our carrying capacity has probably increased. Our ability to run more stock at less per stock is probably the value we got out of it [by being able to] lock the cattle off sweeter country than normal, and [the] couple of extra watering points so we could add a few more [cattle] without taking more grass out of the same areas." (ID1)*

A few graziers described how these improvements had led to reduced operational costs and improved drought resilience. Specifically, they reported needing less supplementary feeding, feeling better prepared for drought, and having less maintenance costs. Some interviewed graziers highlighted the

difficult times they had been through recently, with low cattle prices and rising maintenance costs impacting on their business bottom line. However, the substantial increase in groundcover and species diversity resulting from their GRASS 1 land management improvements meant less need to pay for feed supplements.

> *"So as far as profitability goes, I don't think it changed much, but what I probably would say is that ...the cattle seem to do well. There was no need for any supplements when it got dry... the ground seemed to stay greener for longer, definitely had improved moisture retention." (ID27)*

A number of other business benefits were also mentioned. For example, some graziers noted the value of creating a business plan in conjunction with the GRASS 1 program. Engaging in this planning opportunity gave them a better understanding of their current business needs and future expenses, enabling them to identify and schedule more property improvements. In addition, two graziers indicated that the program helped them be proactive in meeting any future regulatory requirements.

Figure 14. NQ Dry Tropics staff member conducting a land condition assessment during GRASS 1 Program (Image credit: NQDT)

Sub-question: To what extent have APLMs helped graziers improve their land management?

Indicator: Level of grazier agreement (quantitative)

Data source: Interviews

There was strong agreement amongst graziers regarding the extent to which the APLM helped them improve their land management practices, with the majority agreeing that the APLM was helpful. Some interviewees were still very early in their project implementation, despite their involvement with the GRASS 1 program being at least two years prior to the interview and noted that while the APLM had

slightly improved their land management practices, this was primarily due to the planning opportunities it afforded.

> *"I couldn't say to what extent exactly, … but um, yeah, it was part of the puzzle. You know, it's quite a complex thing managing land, but it was a good boost at the right time to have some structure and mapping out there." (ID24)*

Six graziers thought that the APLM had not specifically helped them with new management information or advice, because they believed they were already knowledgeable and confident about their preferred land management practices, prior to participation in the GRASS 1 Program.

> *"I found that that the [delivery partner] officer was great and very cooperative and helpful. But I don't feel that she came up with any ideas that were new outside of what we had already decided to do or felt that were issues that needed rectifying." (ID9)*

Others noted that while they did not necessarily refer back to the APLM frequently, it was there as a document for future guidance. As with trying to ascertain the impact of the APLM on business practices, some graziers noted that it was difficult to easily measure the extent to which their APLMs have helped them improve their land management.

> *"That's sort of a bit of a tough one. It's sort of hard to measure. I think it certainly gave us something to work towards. It was interesting because we've always been really conservative anyway with our stocking rates and stuff, but yeah, I'd say it's still beneficial." (ID1)*

Data source: Survey

All survey respondents besides one (98%, n=45) indicated that the APLM provided some level of help in improving their land management (Figure 15).

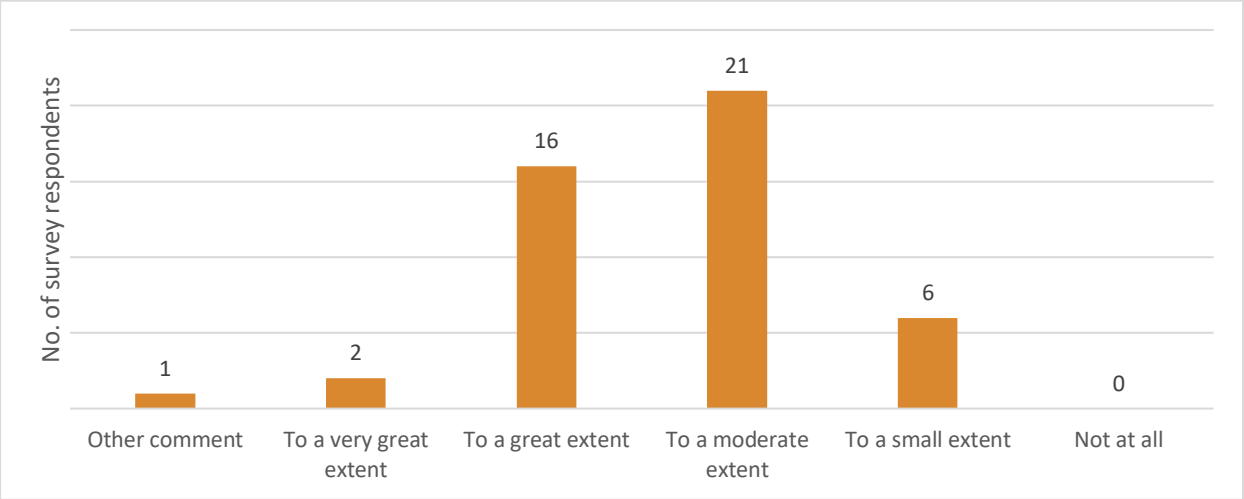

Figure 15. Extent to which the APLMs improved respondents' land management (survey data, n=46)

Sub-question: How have APLMs helped graziers improve their land management?

Indicator: Grazier insights on how APLMs have helped their land management. Extent of land management activities completed.

Data source: Interviews

Graziers were asked to describe the ways in which they felt the APLM had particularly helped them improve their land management practices. Some graziers provided multiple responses (Figure 16). The most common way, cited by ten graziers was the impact that the process of developing an APLM had

on their pasture, both in boosting pasture quality and diversity as well as facilitating pasture management. Relatedly, this pasture improvement enabled rotational grazing on six of the interviewed properties. Other commonly mentioned improvements included material infrastructure outcomes such as fencing, as well as the general expert assistance and guidance provided through the APLM development process .

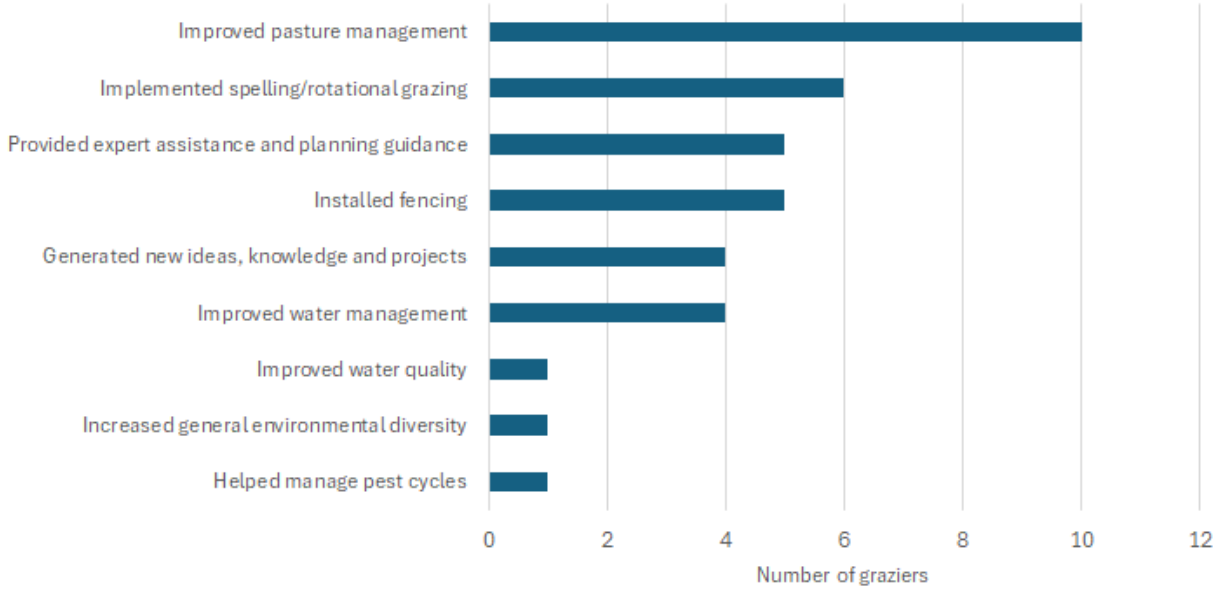

Figure 16. Ways in which the APLMs improved respondents' land management (interview data)

The most significant impact identified was improved pasture management through better grazing practices, with ten graziers reporting improvements in this area. There were four main reasons graziers linked the APLMs to improved pasture management:

1) goal setting through the APLM development process;
2) expert advice (also explained in more depth below);
3) the funding available in the program; and
4) the data, monitoring, and mapping information that was provided by the delivery partners.

Through these services, graziers were able to implement rotational grazing systems, spelling paddocks, and improved their knowledge and management of land condition over time to increase and enhance groundcover. Graziers also described various new practices they implemented because of their APLMs, from adjusting stocking rates to implementing planned and deliberate rest periods. Some implemented intensive rotational grazing with rest periods of up to 50 days, while others focused on shorter rotations with careful monitoring of groundcover. Many reported seeing rapid improvements in pasture condition, species diversity, and soil health, with several noting improved drought resilience and the reduced need for supplementary feeding.

> *"This GRASS project in this particular paddock, [it] was the very first one we rolled out, and we saw immediate positive results. And … you drive down there now, and it gives us a great deal of pleasure and enjoyment to see how that has regenerated. And when we think there's ever a risk that we're going to have any sort of negative impact on that paddock, we are now able to withdraw the livestock and just always keep good groundcover there in line with seasonal conditions." (ID21)*

The second major way in which the APLMs improved the respondents land management was through infrastructure improvements, particularly through strategic fencing and water point installation, which contributed to better grazing management. These improvements were facilitated by the funding made

available through the incentive projects; however, the interviewed graziers linked them to the development and implementation of their APLMs. This is because the APLM development process gave them the time and assistance to plan infrastructure improvements that would be of most benefit to their particular context (i.e. property, business and situation). The incentive funding then enabled them to action those plans. Five graziers specifically mentioned installing fencing, while four reported improved water management and erosion control measures. These infrastructure improvements were interconnected, with the placement of fencing and watering points designed to work with natural land types to enable more effective grazing across their properties. Several graziers mentioned how the infrastructure improvements helped them manage different land types more effectively and reduce erosion around water points.

> *"We were able to make smaller paddocks so the cattle can be [moved], the paddocks can [be] rotationally grazed... Then you get a longer rest period... and being able to set up the water [system] properly has really helped." (ID22)*

The third key way in which the APLMs assisted in improved land management was through the planning support and expert assistance provided throughout the APLM process, with five graziers highlighting this aspect. For some, it validated their existing practices while providing new ideas and technical guidance. The support came in various forms, from helping with initial planning and identifying priority areas for improvement, to providing ongoing technical advice and the monitoring of results. Many graziers valued having access to expert knowledge and the ability to discuss ideas with someone who understood livestock production.

> *"It sort of gave me [the] guidelines that I needed, and then that reinforcement that ... I was doing it right. For us, … having that kind of action plan in place, if things were changing, that I didn't think was right, that I actually had an extension officer to come to talk to me about it, so nothing really went haywire. The support from that, from the extension officer, that data can say that, yeah, I was doing the right thing... it can make a difference from, like, just a little change in mindset, you can achieve really good outcomes. I think that's probably the best thing I've got out of it, that we gained the confidence and having support." (ID27)*

Beyond these main themes, graziers reported various other benefits from the APLM process. Two graziers mentioned improved pest management through breaking pest cycles as part of their project activities, particularly for cattle ticks. Several noted a range of environmental benefits including tree regeneration and increased biodiversity. Water quality improvements were mentioned by some, particularly regarding reduced runoff and better erosion control. The planning process also helped some graziers with benchmarking and compliance requirements, while others valued how it assisted them to document and structure their improvement plans.

Data source: Property visits

The APLMs prompted graziers to improve grazing land management such as:

- managing riverfront by fencing and installing watering points, therefore reducing cattle pressure in riparian areas;
- fencing to divide paddocks, allowing better stock management;
- improving their overall stock management approach;
- improving their pasture growth and diversity (species composition);
- managing their pastures according to land type;
- identifying areas in poor condition and setting management actions, such as spelling and cattle exclusion; and
- establishing other infrastructure, like watering points and whoa boys (low profile earth banks that intercept water runoff).

They also increased the graziers' awareness of good groundcover management and conservative stocking practices. Several graziers mentioned that they already had those ideas in mind before the

APLM was developed. However, the support from the extension staff motivated them to consider these concepts further, and the plan helped them prioritise these ideas and execute them. The APLM gave the graziers more confidence and in some cases, it updated their attitudes from following traditional management "*old family practices*" to more sophisticated grazing management activities, such as optimised pasture utilisation, stocking according to carrying capacity, and rotational grazing.

The provision of incentives through the GRASS 1 program helped graziers to realise these ideas, which had been held back due to financial constraints, which were found to be the most prevalent barrier holding landholders back from making these changes in the past (see question on incentives).

A lack of time and physical limitations due to old age were other barriers to practice change, mentioned by two graziers, however they believed these were helped by the APLMs.

Positive experiences associated with the APLM process influenced some interviewed graziers' thoughts, feelings and mindsets towards practice change, with them citing *"increased confidence", "renewed enthusiasm", "knowing you are on the right track"*, and *"overcoming old family tradition [of land management]", as a result of their involvement in the program*.

Sub-question: Have graziers continued to maintain or improve best practice land management since the program?

Indicator: Extent to which graziers agree that they have continued to implement best practice. Current land management actions.

Data source: Property visits

All the properties visited were on a trend of continuous improvement. Beyond implementing what they set out to do through GRASS 1, the landholders and property managers had a mentality of continuous improvement where they saw opportunities, and most had plans for further work. Examples of practices and actions that they intended to continue doing included:

- destocking;
- using grazing pressure (crash grazing) as needed to control weeds and reduce fuel load to mitigate fire risk;
- continuing to subdivide paddocks and do rotations;
- establishing infrastructure, such as building retention banks and adding more watering points (which then enabled rotational grazing);
- advancing their education journey; and
- spelling and excluding cattle from degraded areas.

Sub-question: What are the motivations, barriers or opportunities that are driving decisions on adoption of industry standard land management practices?

Indicator: Grazier insights on what is driving decisions on land management

Data source: Interviews

The interviewed graziers provided detailed insight into why they were motivated to participate in the GRASS 1 Program (Figure 17).

Figure 17. Key drivers motivating graziers to participate in the GRASS 1 Program (interview data)

The strongest motivation expressed by the interviewed graziers was a desire to improve land condition, particularly focusing on soil health, grass condition, and overall land stewardship, with eleven of the eighteen graziers interviewed explicitly citing this as their primary driver. For many, this stemmed from a deep personal connection to the land and a desire to enhance its condition. Several graziers mentioned their feelings of responsibility and duty to ensure their land and associated biodiversity was healthy, both for their own business needs (healthy land being productive land) but also for broader environmental reasons. This motivation was often linked to a desire to leave the land in better condition for future generations.

> *"We just have a deep need, a deep desire to work with nature and grow the grasses and look after our trees and protect our springs... we feel very privileged to live the life we do in our environment and there's nothing drives us more than wanting to protect it and sustain it as it is." (ID2)*

The second major driver related to practical land management concerns, particularly preventing erosion and managing water, with nine graziers specifically mentioning erosion control and four focusing on water retention. These motivations were often interlinked with production benefits. Many graziers recognized that improved land condition would lead to better productivity and reduced costs, particularly during drought periods. Six graziers mentioned the financial incentives available through the program serving as a catalyst to implement changes they already wanted to make.

> *"If you've got bare areas of land, you know you're getting erosion and further degradation of the land. However, on the flipside, if you're improving groundcover, you are improving the pasture... you're improving productivity which comes back to kilos of beef and money income for us." (ID9)*

The third largest motivation for participation centred around knowledge and support, with eight graziers specifically mentioning the desire to learn and access expert help. Many valued the opportunity to test and validate their ideas about existing practices while gaining new insights and technical guidance.

> *"If I don't know what's going on and whether I've got it under control... having that extension officer there to just to say, well, this is what we could do... they had more ideas from what other landowners have done." (ID27)*

Some graziers were motivated by wanting to be proactive in staying ahead of potential future regulations, particularly regarding Reef protection. Others saw their participation as an opportunity to demonstrate their environmental stewardship by improving biodiversity on their property.

> *"I believe we're bringing the world back into these areas, because we've got more water available so even the birds will follow the water … just the biodiversity … all the different wildlife and flora and fauna that we [now] see all the time. There's so many benefits." (ID2)*

Beyond these primary motivations, graziers cited various other drivers including: implementing infrastructure like fencing; improving grazing management systems; reducing drought impacts; and managing weeds. Several graziers emphasised that while financial support was helpful, their core motivation was improving land condition, which they saw as fundamentally linked to both environmental stewardship and long-term business sustainability.

Data source: Survey

For the survey respondents, the greatest motivations to participate in the GRASS 1 Program were wanting to improve soil health (21%, n=27), to improve productivity (20%, n=26), for the environment (20%, n=25), to improve their farm for future land managers (13%, n=17),financial reasons (e.g. increased profitability, saving money, etc.) (8%, n=10), for regulation compliance (7%, n=9),and to make managing their farm easier (6%, n=8) (Figure 18). Other reasons, noted by three respondents (7%), included: gaining access to benchmarks to evaluate their land management; Northern Breeding Business (NB2) program;[5] and to fast-track the development of their property in line with their grazing principles.

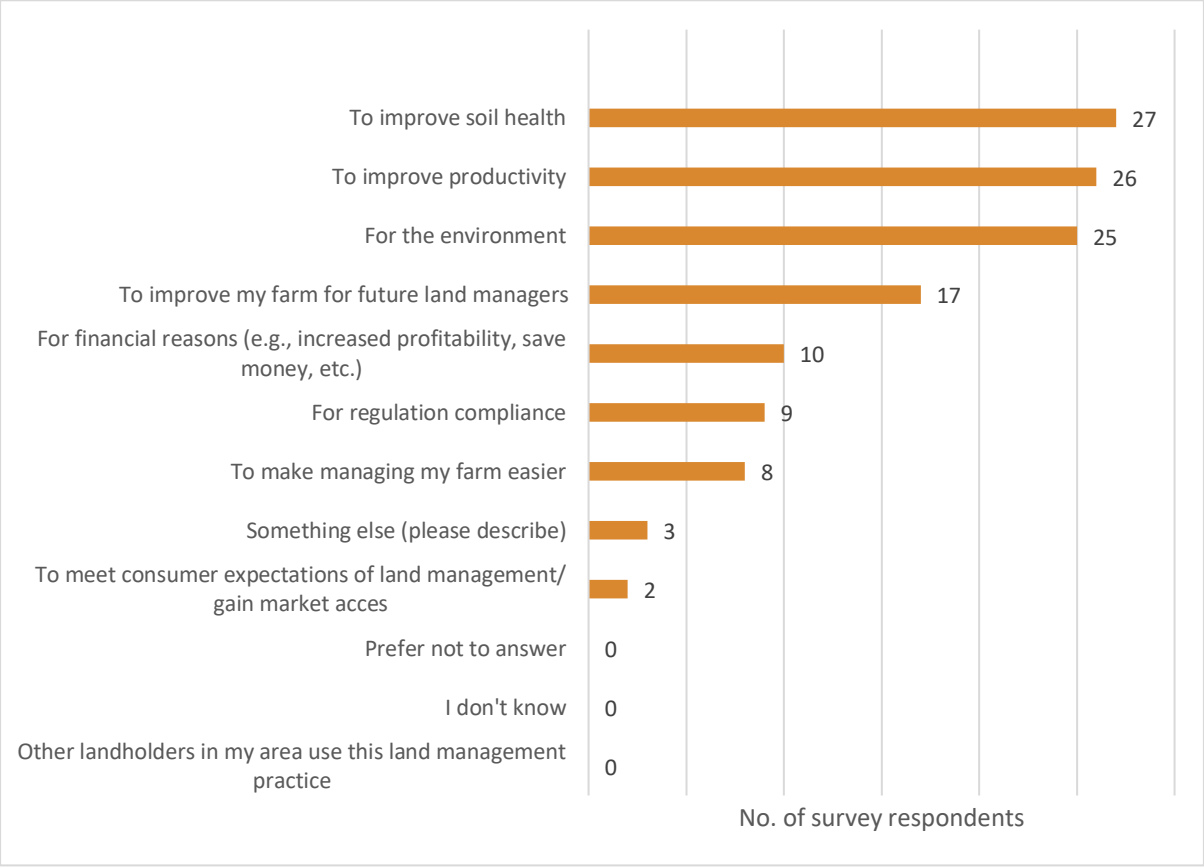

Figure 18. Respondents' motivations to participate in the GRASS 1 program (survey data, n=46)

[5] "NB2 is a producer-directed research and adoption program exploring opportunities to improve reproductive rates, decrease mortality, increase turn-off weights and improve genetic potential in northern herds by: herd management; feedbase; business' practice change" (Meat & Livestock Australia, 2025)

Data source: Property visits

For those graziers who received property visits, adequate levels of cash flow were generally mentioned as a major limitation to any land management actions that involve infrastructural purchases or improvements to protect riparian areas, exclude cattle from degraded sites, and manage stock through rotations. In these cases, the financial incentives were a significant motivation to participate.

However, even with sufficient financial reserves, the labour, machinery and technical skills required to set up new infrastructure could also be a challenge in these cases. Furthermore, graziers are often time-poor, so having someone assist them with the planning involved in infrastructure projects, can be of considerable help when initiating practice change.

In addition to the APLMs, and works undertaken with the incentives, graziers at the properties visited, saw further opportunities to:

- improve pastures;
- manage regrowth (trees);
- revegetate creeks and banks;
- manage for weeds;
- subdivide paddocks by land type for improved stock management;
- install more watering points; and
- rehydrate the landscape.

Sub-question: How effective have incentive projects been for supporting graziers to improve land management?

Indicator: Extent of grazier agreement that incentive projects have been effective

Data source: Interviews

All of the graziers interviewed who had undertaken an incentive project said it was effective in supporting them to improve their land management practices. However, it is important to note that some were unsure about whether funding they had received in the past was from the GRASS 1 Program incentive funds, or a different funding pool. The responses summarised in this section refer only to those graziers who were sure that their incentive funding was provided through the GRASS 1 project.

While most of these graziers spoke generally about the overall effectiveness of the incentive projects, others provided specific examples of what they thought were the most beneficial factors for them with regards to improving land management. The most common reason was that the incentive project provided the funds required to implement their chosen land management practice(s) (Figure 19).

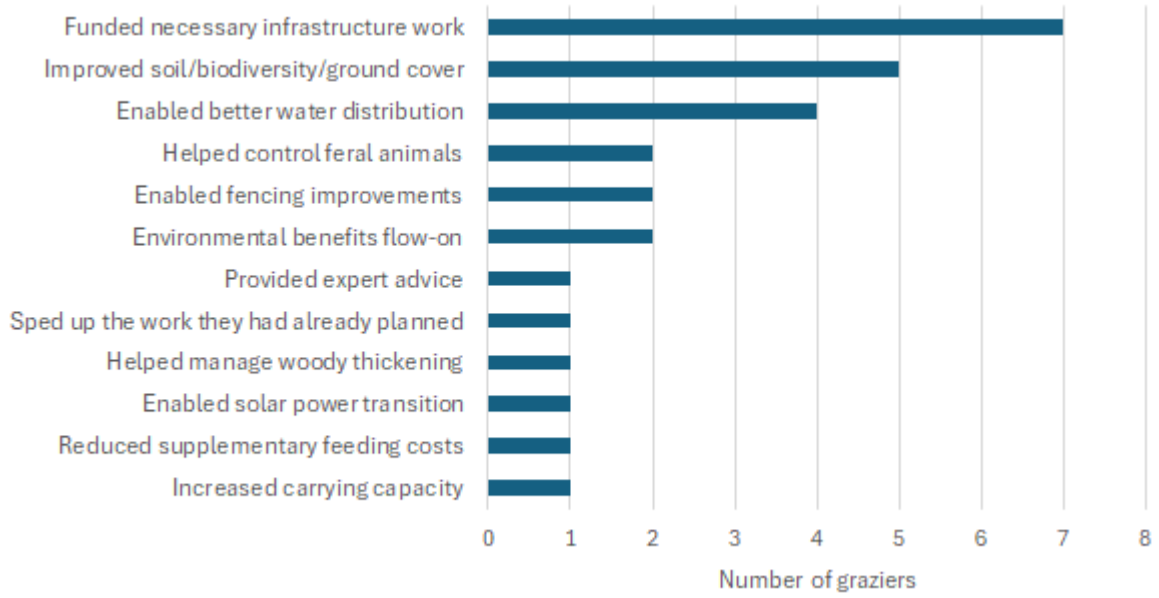

Figure 19. Factors influencing the effectiveness of GRASS 1 Program incentive funding for improving land management (interview data)

Funding provided through the incentive projects enabled critical infrastructure improvements to be made that otherwise may not have occurred during that time, due to limited financial reserves. In addition, the improvements resulting from the incentive project were seen as generating multiple beneficial outcomes for both landholders and the broader environment.

> *"[The] changes would be much slower without it and much less effective... We win because we've got more good fences and better control over everything. The environment wins because it's just a clear winner... The community wins because it wants a better environment, and the more carbon goes out of the air into the soil." (ID7)*

Reported positive environmental outcomes as a result of infrastructural improvements funded through the GRASS 1 program, included enhanced soil health, biodiversity, and groundcover, and reduced soil erosion. For example, many graziers noted how improved infrastructure facilitated better grazing management, which in turn directly led to enhanced groundcover and carrying capacity. Four graziers reported that water infrastructure improvements enabled better grazing distribution and groundcover management. Several noted reduced operational costs through decreased supplement feeding requirements or transitions to solar-powered water infrastructure.

> *"We've created almost super grass that we can eat, and it has reduced... our supplement bill. Because it's [resulted in] more paddocks, we can specifically target which class of cattle that we're feeding." (ID2)*

Perhaps most significantly, many graziers emphasised that the benefits were compounding over time, with initial improvements enhancing their current and anticipated future land management practices.

Data source: Survey

Twenty-five of the surveyed respondents (54%) indicated that their involvement in the GRASS 1 Program included an incentive project component. A further seven respondents (15%) noted that they had received funding for land improvement around the time of their involvement in the GRASS 1 Program, but were unsure which program provided the funding. The remaining 14 respondents (30%) completed an APLM but did not receive incentive funding, citing reasons such as ineligibility (e.g. having off-farm income, being employed by an NRM organisation or DPI, the funds already being fully allocated, not being offered any funding, or being busy with other project commitments). Some

graziers also said time constraints and personal reasons, such as not needing the funding or leaving it for others who needed it more, influenced their decision not to seek incentive funding.

All of the respondents who received incentives said that the funding was effective in supporting them to improve their land management practices. This was achieved by:

- Giving financial assistance: Many respondents highlighted the importance of financial support, which enabled them to start and complete projects that would have otherwise been unaffordable. For example, one respondent mentioned, "The funding provided paid for the machine and operator to build [contour banks]."
- Enabling infrastructure improvements: The funds were used for critical infrastructure improvements such as installing additional watering points, new bores, tanks, troughs, and fencing. This helped in better distribution of cattle, reducing overgrazing, and protecting riparian areas. One respondent noted, "We used the funds to install additional watering points, minimising the distance livestock need to travel for water."
- Ensuring timely rehabilitation: The incentive project allowed for timely rehabilitation of degraded pastures and waterways and gave graziers a push to go ahead with projects.
- Enhancing land management practices: The project facilitated better land management practices, including rotational grazing and improved pasture cover. Financial support enabled respondents to implement these practices more effectively. "Having the financial support enabled us to split up larger paddocks allowing us the ability to rotationally graze."
- Providing expert advice and support: Access to expert advice from Soil Conservation officers and extension officers was crucial. This guidance helped in designing and implementing effective land management strategies. "Great advice from the DAF extension officer."

Sub-question: Are there any challenges or issues relating to ongoing maintenance of incentive projects?

Indicator: Insights on challenges or issues

Data source: Interviews

Very few graziers who were interviewed mentioned challenges or issues relating to the ongoing maintenance of their incentive projects. Only three challenges specific to the incentive projects were mentioned: difficulties related to heavy rain impacts; lack of time amongst other management obligations; and keeping track of the new rotational grazing systems.

> *"The only challenge is in maintaining it after heavy rainfall. That's all we've had to do so far. Part of what we did was put rock barricades across these erosions - big rocks. And that's doing a marvellous job." (ID18)*

However, as these interviewees mentioned, these were reasonable management obligations that they would expect to shoulder as part of their normal business operations.

> *"The main maintenance has just been rotational grazing practises and just maintaining the fence and water infrastructure which is in keeping with everything we do on the rest of the property. That's not anything too burdensome." (ID9)*

One grazier noted all structures on farms need to be maintained, and the more structures you have, the more maintenance that needs to be done. However, another grazier noted that their maintenance had reduced substantially because of the incentive project, due to the replacement of petrol motors for a solar pump.

> *"We've saved a lot of work with petrol motors. I swapped that over for a solar, it just made it a lot easier, a lot less expensive. You're not going down there every time to start it." (ID19)*

Data source: Property visits

Graziers whose properties were visited that received incentives had very positive experiences: they were appreciative of what they were able to do with the funds; as well as the support from, and relationships with, the field staff; and believed that the administrative process worked well.

Of the graziers whose properties were visited, very few thought there were ongoing challenges to the maintenance of those improvements that were made through the incentives project. However limited cashflow was mentioned as a constraint to undertaking any remaining actions in the APLM that required costly infrastructure improvements.

Challenges to the maintenance of groundcover included maintaining cover during extremely dry periods and managing pasture dieback, especially given there is little knowledge about what causes it and how to prevent it.

In addition, some people reported encountering technical challenges with some of the infrastructure, such as pumps, but these were overcome.

Sub-question: To what extent have graziers improved their awareness and compliance with Reef regulations?

Indicator: Grazier understanding of regulations. Grazier compliance with regulations

Data source: Interviews

Most graziers who were interviewed remembered discussing the Reef protection regulations with their extension officers, either in general, or as part of their GRASS 1 Program. However, there was a wide range of responses regarding their knowledge of, and compliance with, these regulations (Figure 20).

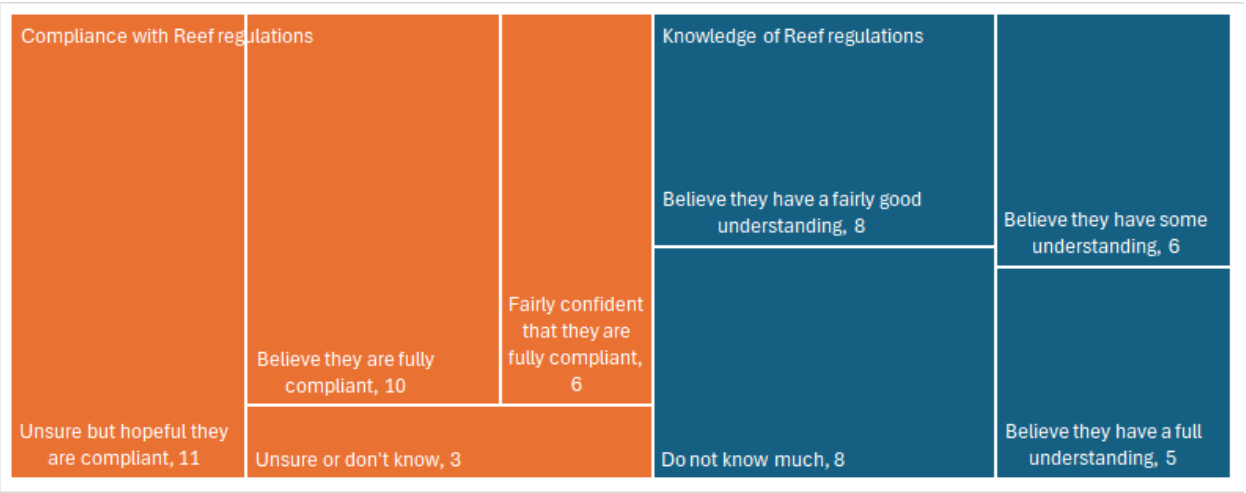

Figure 20. Graziers' self-reported compliance (orange) and awareness (blue) with Reef regulations (interview data)

Ten graziers stated they believed they were fully compliant with the Reef protection regulations, six were reasonably confident of their compliance, and eleven were unsure but hopeful that they were compliant. Only three graziers indicated they did not know or were unsure about their compliance status. However, most of this confidence was not based on the results of previous audits or inspections, but instead appeared to be based on their beliefs about how likely their operations and land condition might be of impact to the Great Barrier Reef.

> *"I think we'd be very compliant because we in front of our eyes, we can see that suspect areas are being improved by and there as a direct result of what we are doing." (ID7)*

When it came to understanding their actual regulatory requirements, knowledge levels were mixed. Among the twenty-seven graziers who discussed their knowledge of Reef protection regulations, five reported fully understanding the requirements, while eight indicated they had a fair but not complete understanding, another six said they knew "quite a bit," but eight acknowledged knowing "not much at all." Some graziers did not directly respond to the question, instead discussing their geographic location, water cycles on their own property, or more general comments about the Reef protection regulations.

> *"I don't know a lot. I keep records of chemicals... and we're high up in the catchment... for us it is kind of important to not be a culprit in having a lot of run off or sediment going out of our system into systems downstream, because [we know] it starts with us." (ID4)*

Several graziers noted that their involvement in the GRASS 1 program and other land management initiatives had ensured their practices aligned with regulatory requirements, even if they weren't explicitly focused on compliance. Many indicated that while they might not fully understand all of the regulatory details, they were confident their existing land management practices met or exceeded the requirements. This self-assessment was based on actual land condition and management practices, as well as a gut feeling and a desire to be good environmental stewards.

> *"I think we would be compliant. Ah, because that is some stuff that we genuinely care about." (ID29)*

Data source: Property visits

All of the graziers whose properties were visited reported having been spoken to about the Reef protection regulations, by their extension support staff and all felt confident that they are meeting the regulatory requirements. In addition, these graziers indicated that they thought the Reef protection regulations were not difficult to comply with, and they were not personally concerned about meeting the requirements. Based on the management practice data supplied, all of the grazing operations visited were exceeding the regulatory requirements.

Data Source: Survey

Understanding of what is needed to comply with Reef regulations was high among survey respondents, with 70% of respondents (n=32) indicating they knew "most" (46%, n=21) or "fully understand" (24%, n= 11) what they need to do. A smaller proportion of respondents only knew "some" of what they need to do (28%, n=13) and one respondent (2%) noted they "don't know what to do" to comply with Reef regulations.

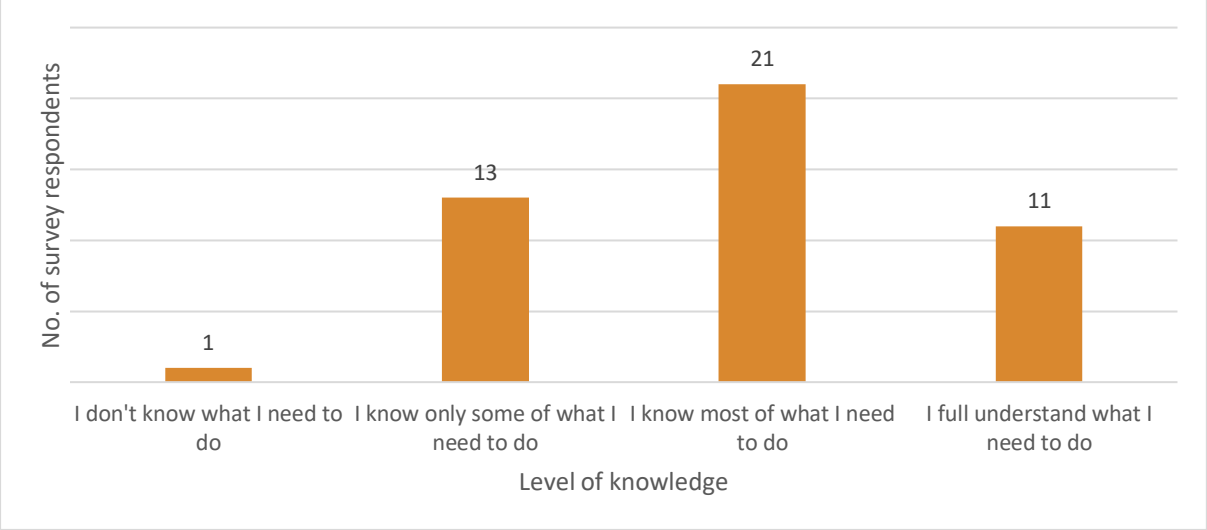

Figure 21. Extent to which respondents are aware of what they need to do to comply with the Reef regulations (survey data, n=46)

The largest proportion of respondents believed that their property was 'fully compliant' with Reef protection regulations (59%, n=27), followed by 'partially compliant' (26%, n=12), and those that noted they didn't know to what extent their property was compliant (15%, n=7) (Figure 22).

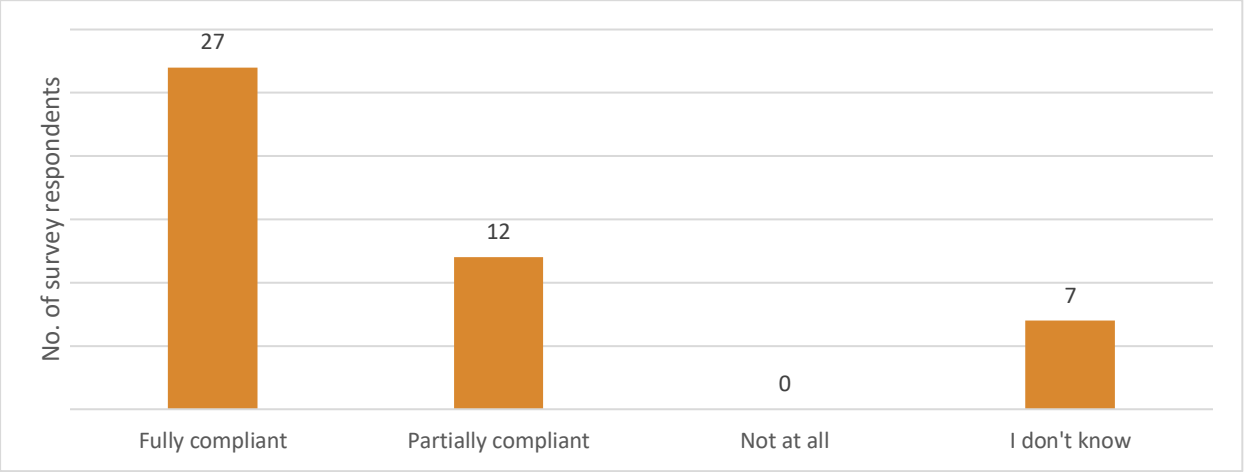

Figure 22. Extent to which respondents believe their property is compliant with the Reef regulations (survey data, n=46)

Sub-question: To what extent do graziers feel that their land management capability[6] has improved since their involvement with the program?

Indicator: Extent of grazier agreement that their land management capability has improved

Data Source: Survey

Most of the survey respondents believed that the GRASS 1 Program had increased their confidence in land management (85%, n=39). Of these, 49% (n=19) noted it had increased their confidence 'to a moderate extent', 33% (n=13) 'to a great extent', 8% (n=3) 'to a very great extent', and 10% (n=4) 'to a small extent' (Figure 23).

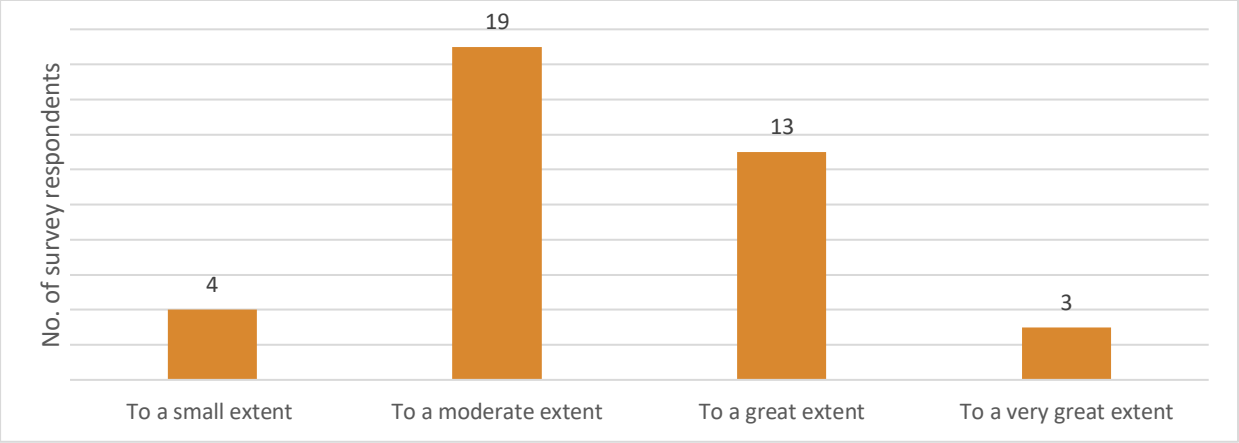

Figure 23. Extent to which the program increased respondents' confidence in land management (survey data, n=46)

[6] Following discussion with DETSI, the word "confidence" was used to measure capability, to reflect this factor relates to the perceived personal capability of the grazier, rather than financial or other external factors that influence capability.

Data Source: Property visits

All of the graziers whose properties were visited said the GRASS 1 program had not increased their confidence to improve land condition, however no further explanation was given for this response. This finding contrasts with the abovementioned survey results.

There are several aspects to consider when interpreting this finding. It is possible that these landholders may have already felt confident in their ability to improve their land prior to their involvement in the GRASS 1 program. Furthermore, the graziers who agreed to these property visits may be more likely to have good land management practices in place and hence were more comfortable to be visited (indicating a self-selection bias for this particular method). Alternatively, the length of time between these particular graziers' participation in the GRASS 1 program and the property visit for this evaluation may have resulted in their lack of attribution of the program to building their confidence (that is, the perceived impact of the program may have diminished in their minds over time).

Nevertheless, this discrepancy in results between the property visits and the survey, indicate the importance of using mixed methods and multiple sources of evidence to detect change in program evaluations and increase the validity and reliability of these findings.

Sub-question: In what other ways have graziers modified their land management practices since involvement in the program and what is driving this?

Indicator: Insights on current land management

Data source: Interviews

Many graziers have continued to implement and expand upon practices learned and adopted through the GRASS 1 program. Several graziers reported that they have intensified their rotational grazing practices beyond what they initially planned. Others have made additional infrastructure improvements, in particular installing extra fencing and water points to support better grazing management.

> *" Now we run our mob as one mob or two mobs instead of spread out... basically, three quarters of the place is bare of cattle at any given time, so we've just taken it further." (ID5)*

In addition to continuing the work they had already begun through their participation in the GRASS 1 program, some graziers have branched out into other land management improvement practices, often starting with small-scale projects that they could fund from existing cash flow without the need for incentives. For example, some have started implementing multi-species cropping on additional sites after seeing success with initial trials. Four graziers specifically mentioned establishing a carbon project or expressing interest in learning more about carbon farming and how to implement it on their properties.

> *"We started a carbon project and then we're using that to help manage all our carbon resources." (ID24)*

Looking to the future, graziers identified numerous opportunities for further land management improvements, including enhancing pasture management and diversity, adding extra fencing and increasing water infrastructure. Some graziers noted the ongoing need to manage erosion, emphasising the significant cost that erosion control can incur. Others expressed a desire to boost their weed management practices. Continuing to increase pasture quality and diversity were the most commonly cited opportunity, reflecting the good outcomes many graziers had experienced in this area of management, due to their participation in the GRASS 1 program.

> *"What I'm focusing on now is improving the grass cover in terms of species... so that I have better fodder for the cattle, because otherwise you end up with areas where they do become overgrazed." (ID31)*

Some graziers mentioned looking to incorporate more intensive practices or infrastructure like contour banks and fish gates, while others aimed to optimize their stocking rates and provide better shelter for stock.

> *"I think there's heaps of things I can do better with, you know, with regard to soil microbiome and sequestering carbon, like better ways of doing those things because that's... still a lot of science to be done there." (ID4)*

The key motivator driving continued practice improvement appeared to be the positive results graziers have observed from their initial changes. Many reported seeing dramatic increases in groundcover, water retention, and an overall improvement in land condition, which had motivated them to expand these practices to other areas of their properties.

> *"It's been a really strong motivating factor to continue to adopt those principles and roll them out across the property." (ID21)*

However, financial constraints remain a significant limiting factor in implementing further property enhancements. Several graziers noted that while they have ideas and desire to implement additional improvements, the cost of infrastructure and a lack of financial reserves or access to other funding had slowed down their ability to execute these plans. This suggests that while the GRASS 1 program successfully demonstrated the benefits of improved land management practices, ongoing financial support may be needed to help graziers fully implement these practices across their properties.

Data source: Survey

Survey respondents were asked about the most significant land management change they had made as a result of the GRASS 1 program. The largest response was 'changed my pasture management' (67%, n=31), followed by streambank management (13%, n=6), and gully management (9%, n=4) (Figure 24). Five respondents (11%) noted they did not change any land management practices. All of the respondents that had changed land management practices noted that they had continued with the land management change/s they made.

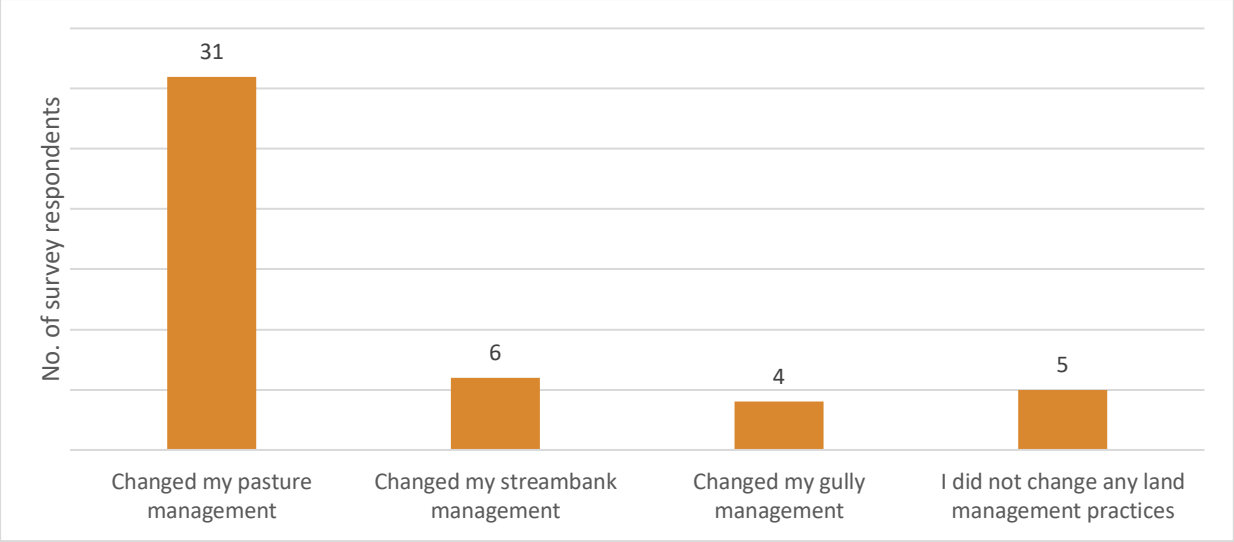

Figure 24. Most significant land management changes as a result of GRASS 1 program (survey data, n=46)

Of the 41 respondents (89%) that had made changes to their land management, only one noted 'no positive result' of the land management change/s covered during their involvement in the GRASS 1 program (Figure 25). The largest proportion of these respondents noted 'a large positive result' (46%, n=19), followed by 'a moderate positive result' (28%, n=13), 'a very large positive result' (13%, n=6), and 'a small positive result' (4%, n=2).

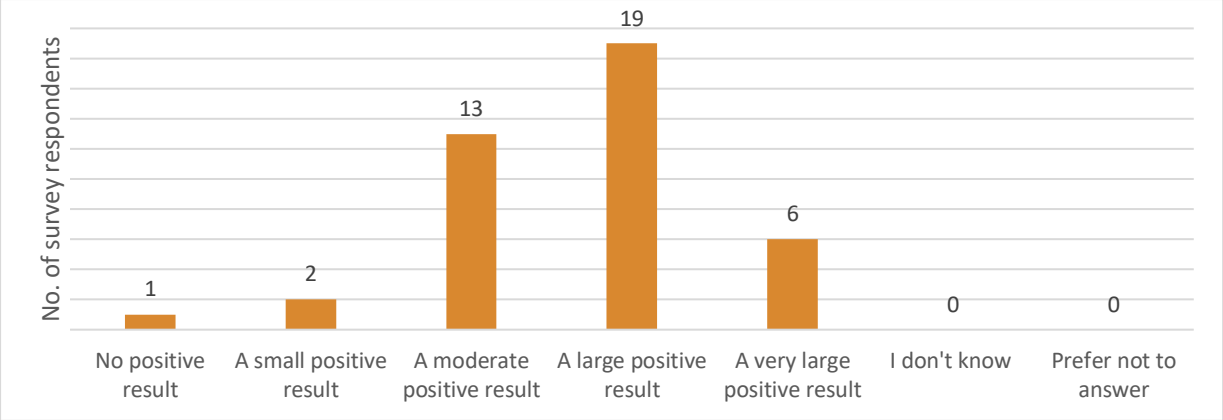

Figure 25. Overall result of the land management change/s covered during the project (survey data, n=41)

Sub-question: What do graziers see as the greatest benefits of involvement in the program?

Indicator: Insights on greatest benefits

Data source: Interviews

Interviewed graziers highlighted a range of most significant benefits which included both tangible (e.g. installing fencing and improving groundcover) and intangible (e.g. increased confidence and access to expertise for increased knowledge) benefits (Figure 26).

Whether they viewed the benefits as practical or conceptual appeared to be influenced by their initial motivations for joining the program and their stage in implementing improved land management practices. Those early in their journey often valued material infrastructure improvements, while those already implementing changes tended to emphasise the value of having expert validation and the opportunity to network, which helped them refine their approach.

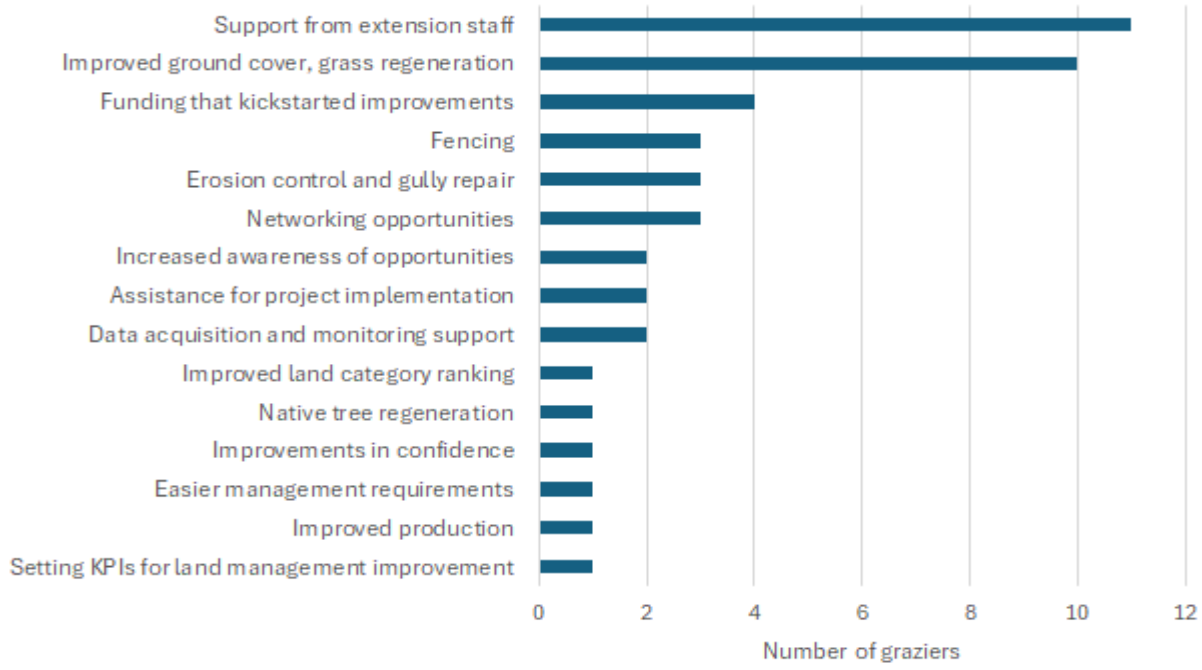

Figure 26. Greatest benefits of the program expressed by graziers (interview data)

The most frequently cited benefit was the quality of extension staff support and guidance with graziers particularly praising the extension staff knowledge and assistance with planning and documentation. For many, this support was transformative in helping them implement changes effectively. Graziers described multiple ways in which the GRASS 1 program staff assisted them. Officers provided crucial help with documentation and paperwork, which many graziers found challenging or time-consuming. They also offered technical expertise and guidance in planning infrastructure placement and grazing management strategies. Some graziers found the opportunity to run ideas past extension staff, as well as talk through their personal hopes and concerns, related to their properties to be invaluable. This 'wrap-around' support was spoken of extremely highly and was a key positive outcome of the program.

> *"The [delivery partner] guys... they talked to me, they discussed it with me, and went over with me, but they actually are the ones that wrote it all down... they are just amazing people... so wonderful and so smart." (ID29)*

Staff were praised for their accessibility, ongoing support and ability to translate technical knowledge into practical solutions. Many graziers valued how extension officers helped them refine and validate their existing ideas, whilst also providing new perspectives on land management approaches.

The second major benefit mentioned in the interviews was improved groundcover and land regeneration with many graziers reporting significant improvements in pasture condition and biodiversity. Graziers observed rapid and substantial changes in their land condition, including better water retention and reduced runoff. These improvements in groundcover and land regeneration were substantial and often exceeded graziers' expectations. They reported multiple aspects of improvement including increased pasture diversity, better species composition, and enhanced soil health. Several graziers also noted increased pasture diversity and the return of native species. Several graziers noted that one of the overarching benefits of the GRASS 1 program was the complete transformation of previously degraded areas. These improvements in groundcover often led to more evenly distributed grazing patterns and ultimately increased carrying capacity.

> *"When we first bought [the property], like the runoff, the water was always brown... now because we've got the groundcover... when there is water running it's actually clear... We're able to achieve that in such a short time frame." (ID2)*

As previously mentioned, the GRASS 1 program's financial support was highly valued. The funding facilitated the commencement of property improvements that many graziers had been planning, but couldn't afford to implement immediately, with several noting that they had achieved in a few years what might have otherwise taken decades. Physical infrastructure improvements like fencing and erosion control had lasting impacts on property management. Several graziers reported that the program's monitoring and data collection helped them better understand their land condition and track improvements. The networking opportunities provided by the program were also appreciated, as they connected graziers with experts and other producers, facilitating knowledge sharing and ongoing learning.

The combination of support, funding, and expertise gave many graziers increased confidence in their management decisions and motivated them to undertake additional improvements beyond the initial project scope.

> *"The speed at which it returned... we were amazed how quickly the country regenerated... we could see it was responsive... and that when I said to you about how we've sort of accelerated some of those other projects in the action plan, that was probably a bit of a motivator." (ID21)*[7]

The diverse range of benefits identified by the graziers in their interviews demonstrate how the program delivered value through multiple complementary channels - practical support, technical

[7] It is noted that while graziers spoken to in this evaluation contributed the quick regeneration of land to their participation in the GRASS program, the impact of land management changes may also be reliant on a good rainfall season and several other uncontrollable factors.

expertise, infrastructure funding, and knowledge building - which collectively contributed to significant improvements in land management practices.

Sub-question: What do graziers see as the greatest challenges for their future land management?

Indicator: Insights on greatest challenges

Data source: Interviews

The majority of graziers interviewed did not mention any specific challenges that would impact their future land management practices. However, for those that did, financial constraints were the main challenge identified, with these graziers describing how limited financial reserves combined with increasing costs limited their ability to implement desired improvements (Figure 27).

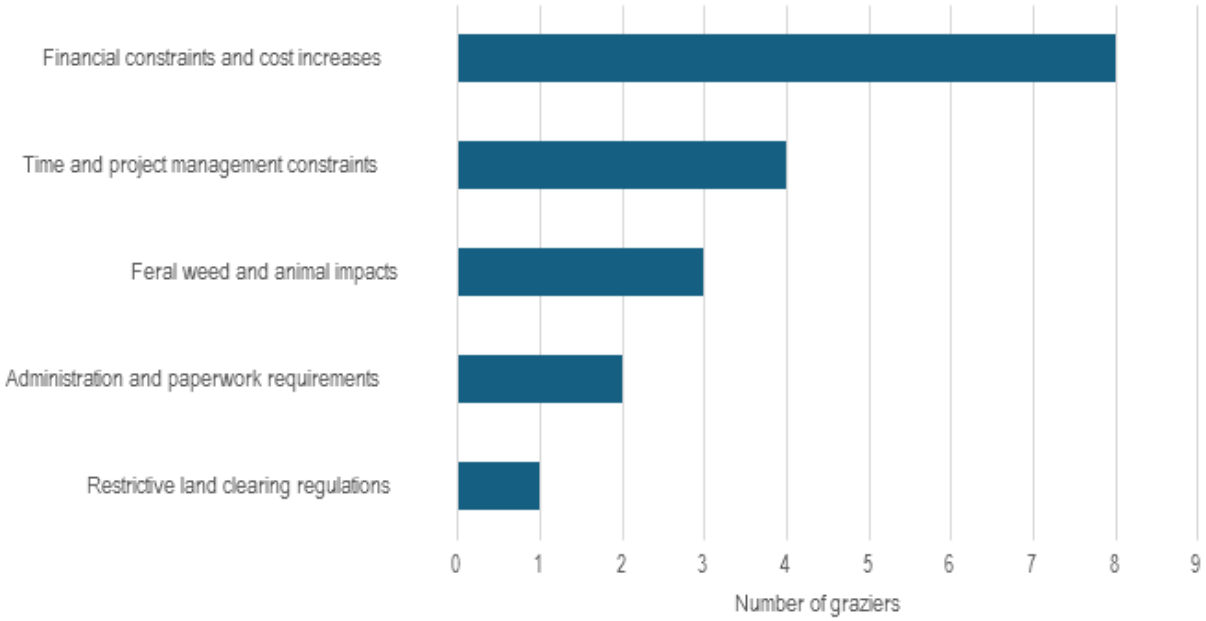

Figure 27. Greatest challenges associated with future land management expressed by graziers (interview data)

While many graziers had ideas for further land management improvement, rising material costs and limited access to finances made implementation difficult. For example, several graziers noted that the main challenge they experienced during the implementation of their APLM was the necessity to contribute a large amount of their own money. They expected that this would continue to be a constraint in any future land management projects that they might seek to undertake. Furthermore, these graziers noted that while program funding was helpful and appreciated, it often only covered a small portion of total project costs, sometimes as little as 10-15%. Rising costs combined with shortages in skilled labour continue to compound this issue, with one grazier estimating that the cost of fencing had doubled, while contractor availability had dropped, during the same period at the GRASS 1 program. This meant that future improvements would likely have to be completed in incremental stages, over longer time periods, which was less than ideal, with high cost projects such as erosion control and fencing likely to be postponed or cancelled altogether. Graziers highlighted the high cost of erosion control works, noting their disappointment at being unable to undertake such projects due to financial constraints, despite a strong desire to contribute to broader environmental outcomes. Others emphasised that planned land management improvements required extensive fencing, for which available funding was insufficient to complete installation.

> *"Finances are the thing that are holding us back... you know if we could do this [improve land management practices] to many areas of the property, we would further reduce problem areas." (ID9)*

Weed and pest management present a considerable ongoing challenge that could undermine other land management efforts. Some graziers noted increasing problems with feral animals such as pigs damaging improvements that had been made through the GRASS 1 Program. One grazier also argued that land clearing rules restricted their ability to control woody thickening and thus their ability to continue to undertake ongoing land management practices. Several graziers highlighted persistent battles with invasive species like *Lantana* sp., which could overtake areas despite other improvements. The spread of weeds was seen as particularly problematic in timbered areas where control was more difficult.

> *"The country that has timber on it is getting overtaken by lantana... We're making progress on some areas of our place, and then we're losing the battle on others with lantana." (ID29)*

The administrative and practical challenges of implementing improvements created additional hurdles. Project time management was also an issue for many graziers, with some noting difficulties in scheduling contractors and completing works while managing regular farm operations. They noted that this problem, alongside continually rising costs, were likely to continue to affect their ability to implement land management practices into the future. In addition, some found the paperwork requirements burdensome given their limited time.

While all graziers were positive about the GRASS 1 program and interested in any future opportunities to participate, three graziers expressed mild frustration with what they perceived to be unclear communication about program rules and their eligibility to access more financial incentives, through the GRASS program, or other funding schemes.

> *"Well, it seems like once you've done a project with [our delivery partner] then you don't seem to get the opportunity to do more. I don't know if that's how it goes, or that's just because I've had my shot..." (ID33)*

> *"No one can give me a definite answer on whether yes, I can go again or not. I thought it would be [a yes or no response] but I just don't seem to get that definite answer…. Is there another project to just to do fencing, or something just to get that done? Other water infrastructure I can do myself if I can just get the fencing done because that's probably the highest cost side of it, but I just don't get an answer." (ID22)*

However, it is important to note that the majority of graziers that were interviewed were very satisfied with the information and support they received through the GRASS1 program.

Sub-question: Suggestions for improvement

Indicator: N/A

Data source: Interviews

Graziers were almost unanimous in their appreciation and praise for the GRASS 1 Program. Throughout the interviews, graziers frequently mentioned how much they valued the expert assistance of extension staff, the funds being provided to them for land improvements, and the opportunities to learn new techniques and then directly apply them on their own properties. They also consistently emphasised how the resulting land management practices that they had undertaken because of their participation in the program had delivered rapid and positive results, often beyond their expectations, and this motivated them to continue these improvements through future opportunities. Nevertheless, when asked, some participants were able to offer suggestions for improvement (Figure 28).

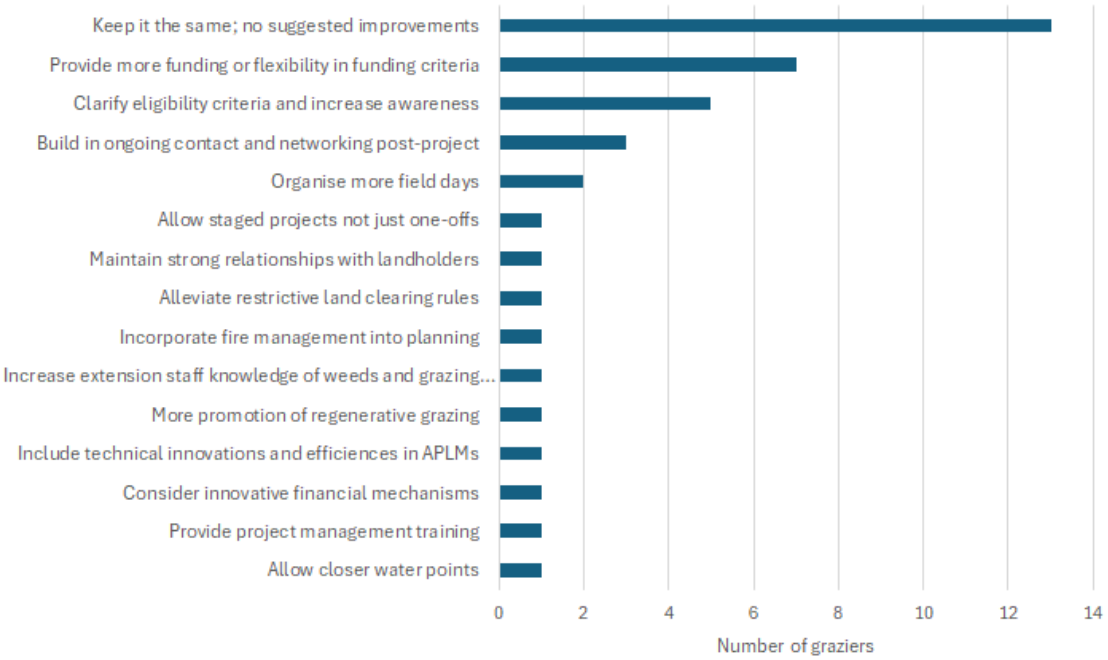

Figure 28. Suggested improvements provided by graziers (interview data)

Perhaps unsurprisingly, the most frequently made suggestion was to provide more funding and greater flexibility around funding requirements and processes, with several graziers suggesting allowing funding for multiple projects over time rather than one-off grants.

Graziers emphasised that while the program was valuable, the funding amounts and parameters could be restrictive, with the funding not covering even half of their project budget, given rising inflation and the rapid increase in costs experienced over the project timeline. In addition, several suggested allowing funding for multiple projects over time rather than one-off grants. Most graziers recognised the limits of funding available through programs such as GRASS 1, with one grazier pointing out the value in looking at alternative ways to financially support land managers. For example, they suggested that for leasehold properties, the Queensland government could consider reducing lease payments as an alternative way to reward good environmental management. They noted this could be feasible as they believed improvements in land condition can be clearly demonstrated, making it straightforward to verify which landholders qualify for lease payment reductions.

> *"If the government doesn't have enough money to be able to provide larger grants, perhaps something they could do would be provide us a discount with our lease like land rent... rewarding the people who are doing good for the environment and looking after the land and improving the land... To me, that would be a really good thing to do because it wouldn't cost the government in terms of having to provide more money, but it would have a massive impact... with land valuations increasing and land rents subsequently massively exponentially increasing, to be able to get a significant discount on that if we are pumping hundreds of thousands of dollars of our money into the land to improve it." (ID9)*

The next main suggestion concerned improving GRASS program awareness and clarity around eligibility criteria, with several graziers noting they only learned about the program through word-of-mouth with personal connections, indicating a need for broader promotion of the program. Some graziers noted that they had reached out their local NRM to ask for assistance rather than finding out about GRASS by advisors reaching out to them.

> *"Finding out about the program seems to be a bit of an issue about what's available…I pursued [delivery partner] for the help to do that project, and I also pursued [other delivery partner] to do the fencing project… So, the projects I've done have been [due to] me pursuing them and*

finding out about them. Whereas… I wish I got an email saying, hey, this project's going on, and its funding is XYZ..." (ID33)

Conversely, other graziers praised the field days and the importance of get-togethers in helping share information about the GRASS 1 program, suggesting that while opportunities to engage were available, some landholders were not aware of or taking advantage of them. A small number of graziers expressed confusion about their ongoing eligibility for funding and program support. Related to this was a desire for more ongoing contact and networking opportunities after project completion with some graziers seeing the value of maintaining ongoing relationships with extension officers and other producers. This may also help alleviate some confusion that graziers experienced regarding which program they had participated in, and which programs were responsible for the different activities they had undertaken.

Graziers discussed limited capacity to even think about everything they need to do on their properties, including farmwork and paperwork, making it difficult to consider participating in programs such as GRASS when they do come up.

"…you've got to do a lot of stuff yourself, which is, it sort of gets me flustered and I don't know how to answer the questions, so we just push it aside and don't do it, if you know what I mean... I literally talked to a girl on Friday about seeing if I could hire her to do the paperwork, because it's, it's, I can't, I'm mentally not capable of doing it." (ID29)

Revision of infrastructure funding requirements was raised by one grazier, particularly around water point placement and fencing specifications, with several graziers advocating for allowing water points closer than the current minimum distance requirements.

"In this country here... it's proven in the good country that the cattle probably only go 500 metres away from the trough... so even when you want to try and get money for water, it's a kilometre... that should be knocked back and (instead) split the paddocks." (ID28)

Other suggestions focused on program delivery improvements, including better cost calculations to account for inflation and the rising costs of materials, more field days to showcase successful projects, and extra training on skills related to project management and administrative requirements in particular, as well as more field days to observe and learn from on-ground examples. Several graziers also suggested expanding the program's scope to include practices like regenerative grazing or to address emerging challenges like fire management. One grazier also noted that restrictive land clearing laws were counterproductive and causing more environmental damage than benefit.

"[We need to] get permission to do some thinning in these areas that we aren't able to clear. We don't want to clear them, but to be able to thin and not have to go around every sucker, would make it more financially viable and faster. Woody thickening is not good for the environment. To be able to drive a machine through to get access would be um, you know ... we want to do the right thing, and we don't want to get in trouble. But we also want to improve the land, so we're sort of stuck between a rock and a hard place on a lot of areas of the property." (ID9)

Data source: Survey

More than half of the survey respondents (57%, n=26) provided free text suggestions for how the program could be improved. These respondents generally found the program to be very good, with tangible results and excellent support. They emphasised the importance of continued funding and ongoing support for effective land management and environmental sustainability. Suggestions for improvement can be summarised into three main themes: funding and compensation, communication and support, and program effectiveness.

A few respondents suggested that the program should have greater access to government funding.

"Could provide loans for the portion not funded by the 20/25 percent grant portion or tie in with QRIDA loans." – Survey respondent

Some believed that offering small rewards or compensation could be an attractive incentive to more participation.

> *"Better rewards for participating in these programmes i.e. ensuring that if a project proposal is put forward for incentive funding and it fits the guidelines, ensure that there is funding money available." – Survey respondent*

> *"Add grass seed to the compensation. Grass cover is key to reducing runoff." – Survey respondent*

Some respondents emphasised the need for more direct communication from the Queensland government staff involved in the program.

> *"Department people reaching out directly (by phone or in person) to tell me about new government projects as they become available." – Survey respondent*

There were requests for improved communication during the application and approval process, with more follow-up checks and support, and increased interaction with landowners at all stages of the program "…(before, during, and after)."

> *"Consistency of project officers and improved communication during the application/approval process." – Survey respondent*

Respondents also suggested incorporating training on pasture budgeting and grazing management into the program, as well as regular follow-up monitoring to validate the program's effectiveness.

> *"Incorporate training for producers on pasture budgeting and grazing management that introduces rest/more rest into pastures." – Survey respondent*

> *"Follow up would be great. We were already well on the way to undertaking changes to improve land condition, and GRASS 1 helped us identify and benchmark priority areas." – Survey respondent*

Additional suggestions included: holding regular information days on current regulation; employing property advisors with real-life grazing experience "…not just uni qualifications"; and incorporating events and collaborative activities to build networks and skills.

> *"Target awareness to those property owners not on board. It's obvious when driving around who they are!" – Survey respondent*

> *"If the program is focused on professional development or skill-building, adding more networking events or collaborative projects can help participants expand their connections and apply what they've learned in real-world settings." – Survey respondent*

5 Conclusions

This evaluation has demonstrated the legacy of the first phase of the GRASS program including land management practice changes that help to improve land condition, increase grazing productivity, and reduce sediment runoff into Reef catchment waterways. Graziers who participated in this evaluation valued the program for the support and advice they received from delivery partners in developing action plans for land management (APLMs) and, where incentive funding was provided, for the financial support that contributed to the completion of on-ground works. The connection between participation in the program and compliance with Reef protection regulations was not seen as a major concern or benefit for these graziers. Although the level of knowledge about the Reef protection regulations varied from grazier to grazier, most felt confident their properties would be compliant with these regulations.

Recommendation for future phases of the GRASS program

- Consider more and alternative financial support options such as increased funding, access to loans, or other compensation for participation. The most common suggestion for improving the program was to increase funding and provide greater flexibility in funding requirements, with some graziers proposing alternative options like lease payment reductions to reward good environmental management. Some graziers suggested providing loans, in addition to incentives, to assist them in contributing to on-ground projects. Other forms of compensation were also suggested, including grass seed.

- Improve communication and support between government programs, delivery partners, and graziers to increase program awareness and clarify eligibility. Graziers emphasised the need for more direct communication from program staff, such as phone calls or in-person visits, or more promotion at field days to inform them about government projects such as GRASS. Graziers also identified a need to improve communication during the application and approval process, more follow-up checks and ongoing support, and more clarity about the eligibility criteria. Some graziers were also keen on more networking opportunities. Increasing program branding and more widespread communication may also help to improve grazier recall of the program in future evaluations.

- Improve program effectiveness. Graziers suggested regular follow-up monitoring to validate the program's effectiveness. Incorporating training on topics such as pasture budgeting, grazing management, and using rest periods for pastures, was also recommended. In addition, graziers indicated they would like more interaction with delivery partners at all stages of the program (before, during, and after). There were a few procedural changes recommended such as changes to the cost calculations due to the increases in material costs, and incentive project specifications.

- Engage graziers early in future program revisions. While acknowledging that the second phase of the program (GRASS 2) has already adopted some changes, there is likely to be value in engaging with graziers earlier in program revisions, particularly given the variety of suggestions made during this evaluation. This will help to ensure any changes being considered will be well-accepted by graziers and will address the major concerns they have about the program. Program champions in each region could be used to test any proposed new changes.

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Image source: BMRG website

Evaluation Plan A

Appendix A

Detailed evaluation plan for GRASS 1[8]

Evaluation Criteria	KEQs	Sub questions	Indicators	Measures of success	Data needs	Data source	Interview, survey or on-site questions
Impact	KEQ: What evidence is there that the project has contributed towards Reef 2050 WQIP land management and water quality targets?	Context: what area of land has GRASS 1 influenced the management of?	Ha of land managed through APLMs	n/a	Quantitative data on area	Final report	
		To what extent is there on ground evidence that graziers involved in GRASS 1 are continuing to implement land management that aligns with industry standards?	Evidence of adoption of actions to meet industry standards and Reef regulation minimum standards	Graziers continue to voluntarily adapt actions that support them to meet standards	Sighting of on ground evidence	Property visits	*Enduring change* - To be sight-analysed by Rod during property visits. Use the P2R survey questions to record evidence of practice changes.
	KEQ: What progress would have been made anyway, in the absence of the QRWQP funding this project?	To what extent do graziers agree that they would have improved land management in the absence of the GRASS 1 program?	The extent to which graziers agree that they would have improved land management without the program	High level of grazier agreement	Level of grazier agreement (quantitative)	Survey Interviews	How likely is it that you would have improved your land management without participating in the GRASS 1 Program? - Not at all likely - Somewhat likely - Moderately likely - Very likely - Extremely likely - I don't know - Prefer not to answer
	KEQ: What, if any, unanticipated positive or negative impacts have resulted from the project?	Did graziers notice any unexpected outcomes (positive or negative) as a result their participation in the program?	Grazier insights on unexpected outcomes	n/a	Grazier insights	Interviews	Have you noticed any unexpected outcomes, either positive or negative, from participating in the GRASS Program?
Legacy	KEQ: What are the long-term benefits to this project? What evidence is there to say this?	To what extent do graziers agree that APLMs have been useful for improving their business and supporting their land management improvements?	Level of grazier agreement (quantitative)	High level of grazier agreement	Level of grazier agreement (quantitative)	Survey Interviews	[Survey question merged with next]

[8] Full details are available in the 2024 GRASS Evaluation Plan prepared by Mosaic Insights for DETSI.

Evaluation Criteria	KEQs	Sub questions	Indicators	Measures of success	Data needs	Data source	Interview, survey or on-site questions
		To what extent have APLMs helped graziers improve their business?	The extent to which graziers agree that the APLM has helped them improve their business	High level of agreement that APLMs have helped improve business	Level of grazier agreement (quantitative)	Survey Interviews	*If agree to previous question* To what extent have the APLMs helped you improve your business? - Not at all - To a small extent - To a moderate extent - To a great extent - To a very great extent
		How have APLMs helped graziers improve their business?	Grazier insights on how APLMs have helped their business $$ values (?)	Graziers identify benefits	Grazier insights	Interviews	In what ways have the APLMs have helped you improve your business?
		To what extent have APLMs helped graziers improve their land management?	Level of grazier agreement (quantitative)	High level of agreement that APLMs have helped land management		Survey Interviews	To what extent has the APLM helped you improve your land management? - Not at all - To a small extent - To a moderate extent - To a great extent - To a very great extent
		How have APLMs helped graziers improve their land management?	Grazier insights on how APLMs have helped their land management Extent of land management activities completed	Graziers identify benefits	Grazier insights	Interviews Property visits	What changes, if any, did you make in your land management as a result of the APLM you received? How did the APLM help you to improve your land management? Were there any challenges or difficulties in implementing the changes recommended in the APLM? If so, what were they?

Evaluation Criteria	KEQs	Sub questions	Indicators	Measures of success	Data needs	Data source	Interview, survey or on-site questions
		Have graziers continued to maintain or improve land management since the program?	Extent to which graziers agree that they have continued to implement best practice Current land management actions	Evidence that graziers have continued maintain or improve best practice land management	Sighting of on-ground evidence	Property visits	How have you continued to maintain or improve your land management practice(s) Were there any challenges in maintaining or improving your land management practices?
		What are the motivations, barriers or opportunities that are driving decisions on land management?	Grazier insights on what is driving decisions on land management	n/a	Grazier insights	Interviews Property visits	What motivated you to make the changes you did as result of the APLM you received? [*If no changes made*: What prevented you from making changes to your land management?] Were there any challenges or difficulties in implementing the changes recommended in the APLM, specifically? If so, what were they? What opportunities do you see for further improvements in your land management?
		How effective have incentive projects been for supporting graziers to improve land management?	Extent of grazier agreement that incentive projects have been effective	High level of grazier agreement	Level of grazier agreement	Survey Interview	*Only for those with incentive projects* Do you believe the incentive projects have been effective for supporting you to improve your land management? In what way/why? *For those without incentive projects* What prevented you from accessing an incentive project?*

Evaluation Criteria	KEQs	Sub questions	Indicators	Measures of success	Data needs	Data source	Interview, survey or on-site questions
		Are there any challenges or issues relating to ongoing maintenance of incentive projects?	Insights on challenges or issues	No challenges or issues identified	Grazier insights	Interviews Property visits	*Only for those with incentive projects* Are there any challenges or issues relating to ongoing maintenance of incentive projects? If so, what are they?
		To what extent have graziers improved their awareness and compliance with regulations?	Grazier understanding of regulations Grazier compliance with regulations	Graziers understand and are compliant with regulations	Grazier insights	Interviews Survey Property visits (different question)	How much do you know about what you need to do to comply with the Reef regulations? - I fully understand what I need to do - I know most of what I need to do - I know only some of what I need to do - I don't know what I need to do To what extent is your property compliant with the Reef regulations? - Fully compliant - Partially compliant - Not at all - I don't know PROPERTY VISITS ONLY: How has your involvement in GRASS 1 impacted your confidence in meeting the Reef regulation requirements (if at all)?
		To what extent do graziers feel that their land management capability has improved since their involvement with the program?	Extent of grazier agreement that their land management capability has improved	High level of grazier agreement	Level of grazier agreement (quantitative)	Survey	Do you feel that the GRASS 1 program increased your confidence in land management? If so, in what ways?
		In what other ways have graziers modified their land management practices since involvement in the program and what is driving this?	Insights on current land management	n/a	Grazier insights	Interviews	Are there other ways that you have modified your land management practices since involvement in the program?

Evaluation Criteria	KEQs	Sub questions	Indicators	Measures of success	Data needs	Data source	Interview, survey or on-site questions
							What has motivated you to modify these practices?
		What do graziers see as the greatest benefits of involvement in the program?	Insights on greatest benefits	n/a	Grazier insights	Interviews	What do you think are the greatest benefits of involvement in the program?
		What do graziers see as the greatest challenges for their future land management?	Insights on greatest challenges	n/a	Grazier insights	Interviews	What do you see as the greatest challenges for your future land management?

Property visit questions and P2R analysis

Appendix B

Note: Graziers have received the participant information sheet detailing what is involved in the visit.

Introduction key points:

- The property visits are about their experiences with the GRASS program - what has and hasn't worked well, what outcomes they have experienced (positive or negative)
- This will inform how the Queensland Government's Department of the Environment, Tourism, Science and Innovation (DETSI) can improve delivery of the GRASS Program in the future.
- Participation in a property visit is voluntary.
- All information provided during the visit will be analysed and reported anonymously. No property identity information will be shared with DETSI or any other government department.

GRASS 1 questions

NOT ASKED DIRECTLY

Q: Is there on ground evidence GRASS 1 graziers are continuing to implement land management that aligns with industry standards?

- To be sight-analysed by Rod during property visits. This is in conjunction with the P2R questions, further below.

QUESTIONS FOR GRAZIER

Q: What changes, if any, did you make in your land management as a result of the APLM you received?

Q: How did the APLM help you to improve your land management (if at all)?

Q: Were there any challenges or difficulties in implementing the changes recommended in the APLM? If so, what were they?

Q: [*If changes were made*] What motivated you to make the changes you did as result of the APLM you received?

Q: [*If changes were not made*] What prevented you from making changes to your land management?

Q: How have you continued to maintain or improve your land management practice(s)?

Q: Were there any challenges in maintaining or improving your land management practices?

Q: Were there any challenges or difficulties in implementing the changes recommended in the APLM, specifically? If so, what were they?

Q: [*For those with incentive projects*] What was your experience with developing an incentive project?

Q: [*For those with incentive projects*] Are there any challenges or issues relating to ongoing maintenance of incentive projects? If so, what are they?

Q: How has your involvement in GRASS 1 impacted your confidence in meeting the Reef regulation requirements (if at all)?

Q: During your involvement in GRASS 1, did the extension officer discuss the Reef regulations with you?

Q: What opportunities do you see for further improvements in your land management?

P2R questions – GRASS 1 and GRASS 2

Note if grazier has completed P2R very recently: the preference is for all graziers to be asked these questions, including those who may have done them recently with the DPs, if possible.

Q: In an average year, what is the total pasture biomass (kg/ha) of the grazing area at the end of the growing season (start of the dry season)?

Q: During the dry season (non-growing season), what is the average number of AE's (Adult Equivalents) grazed in the project area?

Q: During the dry season, how many days in total was the project area grazed for?

Q: How do you determine carrying capacity?

- ☐ Don't consider carrying capacity.
- ☐ Arrived at this figure through experience over time and consistent with the generally accepted view on what this country can carry.
- ☐ Carrying capacity is determined using property maps, observed trend in land condition, and historical stocking rate information, recorded in paddock books or similar, is used to inform assessments.
- ☐ Carrying capacity is determined using property maps indicating land types, infrastructure, assessments of land condition (e.g. ABCD), and distance to water. Historical stocking rate information, recorded in paddock books or similar, is used to inform assessments.
- ☐ Carrying capacity is determined using property maps indicating land types, infrastructure, assessments of land condition (e.g. ABCD), and distance to water. Historical stocking rate information, recorded in paddock books or similar, is used to inform assessments. Additional pasture monitoring tools, such as grazing charts, are used.

Q: How do you manage stocking rates?

- ☐ Rarely adjust stocking rates based on whole property assessment of feed supply and cattle numbers before the start of the dry season (end of the growing season). Cattle numbers not adjusted.
- ☐ Undertake broad assessment of pasture availability and cattle numbers across the whole property before dry season starts (end of the growing season). Cattle numbers may or may not be adjusted.
- ☐ Use long term experience in conjunction with paddock diaries/similar records to assess and adjust stock numbers in every paddock before dry season starts (end of the growing season) to ensure adequate residual pasture and groundcover at break of season.
- ☐ Routinely use forage budgets, grazing charts (or similar) and electronic and/or hard copy paddock/ stock records to adjust cattle numbers in every paddock to ensure adequate residual pasture and groundcover at break of season.

Q: What proportion of your property has Indian couch?

- ☐ Not present
- ☐ Low levels (not obvious)
- ☐ Quite frequent (scattered in mix of grasses)
- ☐ High levels (obvious/ important grass in mix)
- ☐ Very high levels (dominant)

Q: How do you manage areas that are in poor (C) or very poor (D) condition?

- ☐ These areas are not identified or there have been no actions made to remediate.
- ☐ Most areas on the property that are in poor (C) or very poor (D) condition have been identified. Some actions including reduced stocking rates have been implemented.
- ☐ Areas in poor (C) or very poor (D) condition across the entire property have been identified. Stocking rates have been reduced, and, in some areas, stock have been fully excluded.
- ☐ Stock have been fully excluded from all areas in poor (C) or very poor (D) condition across the property. Additional actions including diversion banks, ripping and seeding of bare or scalded areas as well as regularly spelling is undertaken.
- ☐ NA - No land in declining condition.

Semi-structured grazier interview guide

Appendix C

Note interviews will be semi-structured meaning that the questions are a guide only and can be adapted to suit the natural flow of the interview and the context of the interviewee

Consent to participate

Thank you for agreeing to take part in today's interview. Your participation is voluntary, and you are welcome to end the interview at any stage. This interview will only be used for informing this evaluation project and any information we use from today's interview will be deidentified and reported anonymously. For example, we may use deidentified quotes from this interview in reports to the Queensland Government's Department of the Environment, Tourism, Science and Innovation (DETSI), however no identifiable information will be provided to them.

If consent form was not received: Are you happy to provide consent for the information from this interview to be used in this way? (As a reminder providing your consent is voluntary and you can withdraw your consent at any stage.)

We would like to record the interview for our own notes in case we need to go back to check what you have told us. Once we have finished our notes, we will delete the recording, and it is not shared with anyone else. Are you happy for me to record the interview? (Yes/No)

start recording if consent provided

Introduction

As you would have seen from the participant information sheet and as I briefly mentioned when we arranged this meeting, our team at Mosaic Insights are currently undertaking an independent evaluation of the GRASS 1 Program.

As part of this program, you may recall doing a property planning exercise sometime between 2019 and 2022 with [Delivery Partner name] where they would have gone around your property, looked at land condition, pasture improvement, and asked you questions. As a participant of GRASS 1 we are interested in hearing about:

- The usefulness of the Action Plan for Land Management (APLM),
- Your motivations, barriers, and opportunities to maintain or continue to improve best practices in land management,
- The effectiveness of the incentive projects (if applicable)
- Other outcomes from the project, which we will discuss in more detail with you, and
- Additional support that might be needed for GRASS 2 graziers.

As a reminder, there are no right or wrong answers to any of the questions. We are just interested in hearing your honest feedback on the program so we can report on what worked well and what needs to be improved.

Q: Do you have any questions before we start?

A bit about you

Q: To begin, please tell me a bit about yourself and your involvement in the GRASS 1 Program

Probing/follow-up questions, if needed:

- How many years have you been a grazier?
- How many years have you owned the property where the work took place?
- How did you become involved in the GRASS program?
- Describe what participation in the GRASS program looks like for you?
- How long have you been participating in the GRASS program?
- Have you been involved in more than one program through [Delivery Partner name]?
- How easy or difficult is it to know what support you are getting from each different program?

Q: How likely is it that you would have improved your land management without participating in the GRASS 1 Program?

Motivations for participation

Q: What were your reasons/motivations for becoming a participant of the GRASS program?

Probing/follow-up questions:

- Why was this reason important for you?
- Has your reason/motivation for participating in the GRASS program changed over time or remained the same?

Land management confidence

Q: Do you feel that the Program has improved your confidence to improve land condition?

- If it has, what has contributed the most to your improved understanding?
- If not, why not?

Unexpected outcomes – positive and negatives

Q: Have you noticed any unexpected outcomes, either positive or negative, from participating in the GRASS Program?

Probing/follow-up question:

- What do you think are the greatest benefits of involvement in the program?
- Do you think these benefits/impacts will have long term impacts for you?
- What do you think are the greatest drawbacks of involvement in the program?
- Why is this benefit/impact important to you?

APLMs

The next questions are about your Action Plan for Land Management, or APLM. This is the document the person from [Delivery Partner name] would have provided after doing the property planning exercise with you at the start of the GRASS 1 program. Think about the process of developing and implementing the APLM.

Q: To what extent has the APLM helped you improve your land management?

[If no changes made: What prevented you from making changes to your land management?]

Probing/follow-up question:

- What changes, if any, did you make in your land management as a result of the APLM you received?
- In what ways has the APLM helped you improve your land management?
- What motivated you to make the changes you did as result of the APLM you received?
- Were there any challenges or difficulties in implementing the changes recommended in the APLM, specifically? If so, what were they?
- How have you continued to maintain or improve your land management practice(s)?
- Were there any challenges in maintaining or improving your land management practices?
- Q: What opportunities do you see for further improvements in your land management?

Q: To what extent have the APLMs helped you improve your business?

Probing/follow-up question:

- In what ways has the APLM helped you improve your business?
- What were the challenges in using the APLM to improve your business?

Incentive projects

Only for those with incentive projects
Q: Do you believe the incentive project has been effective in supporting you to improve your land management?

- In what way/why?

Q: Are there any challenges or issues relating to ongoing maintenance of incentive projects?
- If so, what are they?

For those without incentive projects
Q: What prevented you from accessing an incentive project?

Reef regulations

The next questions are about the Reef regulations, which are about the obligations of landholders to identify C or D graded land, take actions to retain or improve land condition, and keep records of those actions.

Q: During your participation in the program did any conversation come up around the Great Barrier Reef and Reef regulations?

Q: How much do you know about what you need to do to comply with the Reef regulations?

- I fully understand what I need to do
- I know most of what I need to do
- I know only some of what I need to do
- I don't know what I need to do

Q: To what extent is your property compliant with the Reef regulations?

- Fully compliant
- Partially compliant
- Not at all
- I don't know
-

Overall improvements

Q: Do you have any suggestions for overall improvements that could be made to the Program to better support graziers?

Other comments

Q: Is there anything else you would like to share?

Interview conclusion

Consent for property information – if not already received

You may recall participating in a management practice survey or social survey when you were engaged in GRASS. It would be helpful for the social researchers to access the information you provided at the time.

The information the delivery partner can provide, with your consent, includes:

- P2R management practice survey
- Social monitoring survey, if you gave your consent at the time
- The type of management activity (i.e. incentive project) you received support for, etc.

No identifying property information will be shared beyond the Mosaic Insights research team. The information will be used to compare data arising from your and other interviews to provide aggregated recommendations and reporting on the program.

Note: We will not be requesting any further property information from delivery partners for graziers who withdraw from participating in interviews.

If consent form was not received: Are you happy to provide consent for the information from this interview to be used in this way? (As a reminder providing your consent is voluntary and you can withdraw your consent at any stage.)

Thank you for your time today. Please feel free to get in touch if you think of anything else you would like to share. The next steps for this work are that we are currently conducting a number of interviews with landholders and will analyse these interviews to draw out some key insights and lessons which will be inform the evaluation of the GRASS program. A summary of the results of this evaluation will be shared with GRASS participants when it is completed.

End of interview/stop recording 

Survey email invitation and questionnaire

Appendix D

GRASS 1 Survey Text

Start of Block: Introduction

Q1 Introduction

The Grazing Resilience and Sustainable Solutions (GRASS) program, funded by the Queensland Government, supports graziers in the Burdekin, Fitzroy, and Burnett Mary regions to improve poor or degraded land (graded C and D in the Paddock to Reef reporting). The first phase of the program was called GRASS 1, which ran from 2019 to 2022. You have been asked to complete this survey as a grazier who was involved in GRASS 1.

The GRASS program is funded through the Queensland Government's Queensland Reef Water Quality Program and delivered by four delivery partners: NQ Dry Tropics (NQDT), Fitzroy Basin Association (FBA), Burnett Mary Regional Group (BMRG), and the Queensland Department of Primary Industries (DPI) (formerly DAF). The program owner is the Department of the Environment, Tourism, Science and Innovation (DETSI) through the Office of the Great Barrier Reef and World Heritage (OGBR&WH). Phase two (GRASS 2) commenced in 2023 and runs through to 2026.

About this survey

Mosaic Insights are currently undertaking an independent evaluation of the GRASS 1 Program. As you were a participant of GRASS 1, we are interested in hearing about your experience of this program, the efficacy of this program, and how the future delivery of the program might be improved. There are no right or wrong answers to any of the questions; we are interested in hearing your honest opinion and perspectives.

The following survey should take about 10 minutes to complete. Your participation in this survey is completely voluntary. If you choose to participate all information you provide will be confidential and anonymously reported back to the delivery partners and DETSI. Your consent to participate in this research is indicated by the completion and submission of the following survey. Please refer to the email you received about this survey for further information.

Q2 As part of this evaluation of the GRASS program, some graziers in your area have been interviewed by Mosaic Insights (in November or December 2024) or had a property visit by Rod Kerr (late October or November 2024). Please let us know if you participated in an interview or property visit for this evaluation.

- ○ I/we have not been interviewed or had a property visit late last year for this GRASS 1 evaluation (3)
- ○ My/our property had a visit from Rod Kerr late last year for the GRASS 1 evaluation (1)
- ○ I/we were interviewed late last year for the GRASS 1 evaluation (2)
- ○ Unsure (4)

End of Block: Introduction

Start of Block: Property details

Q3 The following section will ask you to provide some details about yourself and your property. *Note: these questions are of a general nature. You will not be asked to identify yourself or your property, as this survey is anonymous.*

Q4 Which region is your property located in?

- ☐ Burdekin (1)
- ☐ Burnett Mary (2)
- ☐ Fitzroy (3)

Display This Question:

If Which region is your property located in? = Burdekin

Q5 Which catchment within Burdekin is your property located in?

- ☐ Townsville Coastal (1)
- ☐ Lower Burdekin (2)
- ☐ Upper Burdekin (3)
- ☐ East Burdekin (4)
- ☐ Belyando (5)
- ☐ Cape Campaspe (6)
- ☐ Suttor (7)
- ☐ Bowen (8)
- ☐ Don (9)
- ☐ I don't know (10)

Display This Question:

If Which region is your property located in? = Burnett Mary

Q6 Which catchment within Burnett Mary is your property located in?

- ☐ Baffle Creek (1)
- ☐ Kolan River (2)
- ☐ Burnett River (3)
- ☐ Burrum River (4)
- ☐ Mary River (5)
- ☐ I don't know (6)

Display This Question:

If Which region is your property located in? = Fitzroy

Q7 Which catchment within Fitzroy is your property located in?

- ☐ Callide (1)
- ☐ Comet (2)
- ☐ Connors (3)
- ☐ Dawson (4)
- ☐ Dawson Lower (5)
- ☐ Dawson Upper (6)
- ☐ Fitzroy (7)
- ☐ Isaac (8)
- ☐ Lower Isaac (9)
- ☐ Upper Isaac (10)
- ☐ McKenzie (11)
- ☐ Nogoa (12)
- ☐ Theresa (13)
- ☐ Styx River (14)
- ☐ Shoalwater Creek (15)
- ☐ Waterpark Creek (16)
- ☐ Calliope River (17)
- ☐ Boyne River (18)
- ☐ I don't know (19)

Q8 How many years have you been in the agricultural industry?

- ○ Less than 1 year (1)

- ○ 1 – 10 years (2)
- ○ 11 – 20 years (3)
- ○ 21 – 30 years (4)
- ○ 31 – 40 years (5)
- ○ 41 – 50 years (6)
- ○ Greater than 50 years (7)
- ○ I don't know (8)
- ○ Prefer not to answer (9)

Q9 Which delivery organisation worked with you on the GRASS 1 Program (which ran between 2019 and 2022)?

Display This Choice:
If Which region is your property located in? = Burnett Mary

- ○ Burnett Mary Regional Group (BMRG) (1)

Display This Choice:
If Which region is your property located in? = Fitzroy

- ○ Fitzroy Basin Association (FBA) (2)

Display This Choice:
If Which region is your property located in? = Burdekin

- ○ NQ Dry Tropics (NQDT) (3)

Display This Choice:
If Which region is your property located in? = Fitzroy
Or Which region is your property located in? = Burdekin
Or Which region is your property located in? = Burnett Mary

- ○ Department of Primary Industries (DPI) (formerly DAF) (4)

Display This Choice:
If Which region is your property located in? = Burdekin
And Which region is your property located in? = Burnett Mary
And Which region is your property located in? = Fitzroy

- ○ I can't remember (5)

Q10 What motivated you to participate in the GRASS 1 program? *Note*: select up to 3

- [ ] For financial reasons (e.g. increased profitability, save money, etc.) (1)
- [ ] To improve productivity (2)
- [ ] To save time (3)
- [ ] For regulation compliance (4)
- [ ] For the environment (5)
- [ ] To improve my farm for future land managers (6)
- [ ] Other landholders in my area use this land management practice (7)
- [ ] To meet consumer expectations of land management/gain market access (8)
- [ ] To improve soil health (9)
- [ ] To make managing my farm easier (10)
- [ ] I don't know (11)
- [ ] Prefer not to answer (12)
- [ ] Something else (please describe): (13) _____

Q11 Are you currently participating in the GRASS 2 program, which commenced in 2023?

- ○ Yes (1)
- ○ No (2)
- ○ I'm not sure (3)

Q12 What was the most significant land management change you made as a result of the GRASS 1 program (if any)

- ○ Changed my pasture management (1)
- ○ Changed my streambank management (2)
- ○ Changed my gully management (3)
- ○ I did not change any land management practices (4)

Display This Question:

If What was the most significant land management change you made as a result of the GRASS 1 program... != I did not change any land management practices

Q13 Have you continued with the land management change/s you made as a result of the GRASS 1 program?

- ○ Yes (1)
- ○ No (2)
- ○ Not applicable (I did not make any land management changes) (3)

Display This Question:

If What was the most significant land management change you made as a result of the GRASS 1 program... != I did not change any land management practices

Q14 How would you describe the overall result of the land management change/s covered during this project?

- ○ No positive result (1)
- ○ A small positive result (2)
- ○ A moderate positive result (3)
- ○ A large positive result (4)
- ○ A very large positive result (5)
- ○ I don't know (6)
- ○ Prefer not to answer (7)

Q15 How likely is it that you would have changed your land management without participating in the GRASS 1 Program?

- ○ Not at all likely (1)
- ○ Somewhat likely (2)
- ○ Moderately likely (3)
- ○ Very likely (4)
- ○ Extremely likely (5)
- ○ I don't know (6)
- ○ Prefer not to answer (7)

Q16 Do you feel that the GRASS 1 program increased your confidence in land management?

- ○ Yes (1)
- ○ No (2)

Display This Question:

If Do you feel that the GRASS 1 program increased your confidence in land management? != No

Q17 To what extent has the program increased your confidence in land management?

- ○ Not at all (1)
- ○ To a small extent (2)
- ○ To a moderate extent (3)
- ○ To a great extent (4)
- ○ To a very great extent (5)

Q18 **The next two questions are about your Action Plan for Land Management (APLM).** As you may remember, the GRASS 1 delivery organisation (which you said earlier was [DP automatically entered] helped you develop an Action Plan for Land Management (APLM). Preparing this document involved doing a property planning exercise sometime between 2019 and 2022, during which the extension officer(s) looked at land condition, pasture improvement, and asked you questions about your land management, particularly for areas in poor condition.

Q19 To what extent did the Action Plan for Land Management (APLM) help you improve your business?

- ○ Not at all (1)
- ○ To a small extent (2)
- ○ To a moderate extent (3)
- ○ To a great extent (4)
- ○ To a very great extent (5)
- ○ Other comment: (6) _____

Q20 To what extent did the APLM help you improve your land management?

- ○ Not at all (1)
- ○ To a small extent (2)
- ○ To a moderate extent (3)
- ○ To a great extent (4)
- ○ To a very great extent (5)
- ○ Other comment: (6) _____

Q21 The next question is about GRASS 1 incentive projects.

Incentive projects in the GRASS 1 program were on-ground works to help improve land condition and reduce sediment runoff (e.g., adding new watering points, fencing off waterways). These projects received a financial contribution from the Queensland Government towards the costs of the works.

Please note: We understand there are many programs working with landholders to improve their land condition, and you may have received funding from other programs. If you received government funding and are certain this was from the GRASS 1 program, please select the first response in the question below. If you are uncertain where you received funding from, select the second option below.

Q22 Did your involvement in the GRASS 1 Program include an incentive project?

- ○ Yes, I definitely received incentive funding for a project from the GRASS 1 program (1)
- ○ I received funding for land improvement work around that time, but I am unsure which program provided the funds. (3)
- ○ No (2)

Display This Question:

If Did your involvement in the GRASS 1 Program include an incentive project? = Yes, I definitely received incentive funding for a project from the GRASS 1 program

Q23 Do you believe the incentive project was effective in supporting you to improve your land management?

- ○ Yes (1)
- ○ No (2)

Display This Question:

If Do you believe the incentive project was effective in supporting you to improve your land management... = Yes

Q24 Please tell us why or how the incentive project supported you to improve your land management?

_____

_____

_____

_____

_____

Display This Question:

If Did your involvement in the GRASS 1 Program include an incentive project? = No

Q25 What prevented you from accessing an incentive project?

_____

Q26 How much do you know about what you need to do to comply with the Reef regulations?

- ○ I fully understand what I need to do (4)
- ○ I know most of what I need to do (5)
- ○ I know only some of what I need to do (6)
- ○ I don't know what I need to do (7)

Q27 To what extent is your property compliant with the Reef regulations?

- ○ Fully compliant (1)
- ○ Partially compliant (2)
- ○ Not at all (3)
- ○ I don't know (4)

Q28 Thinking about your experience of the GRASS 1 program overall, do you have any suggestions for how this program could be improved in the future? If so, please add them below.

_____

_____

End of Block: Property details

Start of Block: Demographics

Q29 Final questions! Please tell us a little more about you. These questions help us to understand the range of people completing this survey, to give us a better idea of who we have heard from. As a reminder, all responses will remain confidential, and you will not be able to be identified in the survey data.

Q30 Which decade you were born in?

- ○ Prior to 1940 (1)
- ○ 1941 to 1950 (2)
- ○ 1951 to 1960 (3)
- ○ 1961 to 1970 (4)
- ○ 1971 to 1980 (5)
- ○ 1981 to 1990 (6)
- ○ 1991 to 2000 (7)
- ○ After 2000 (8)
- ○ Prefer not to answer (9)

Q31 What is your gender?

- Woman or female (1)
- Man or male (2)
- Other/ non-binary (3)
- Prefer not to answer (4)

Q32 Are you of Aboriginal and/or Torres Strait Islander origin?

- No (1)
- Yes, Aboriginal (2)
- Yes, Torres Strait Islander (3)
- Both Aboriginal and Torres Strait Islander (4)
- Prefer not to answer (5)

Q33 What is the highest level of education you have completed?

- School education (Year 10 or below) (1)
- School education (Year 12) (2)
- Industry specific training, short course or equivalent (e.g., chemical or soils course, etc.) (3)
- Certificate (e.g. Agricultural College, Trade, TAFE qualification) (4)
- Undergraduate Degree (e.g. Diploma, Bachelor, etc. (5)
- Postgraduate Degree (e.g. Master, etc.) (6)
- Other (7) _____
- Prefer not to answer (8)

Display This Question:

If What is the highest level of education you have completed? = Industry specific training, short course or equivalent (e.g., chemical or soils course, etc.)

Or What is the highest level of education you have completed? = Certificate (e.g. Agricultural College, Trade, TAFE qualification)

Or What is the highest level of education you have completed? = Undergraduate Degree (e.g. Diploma, Bachelor, etc.

Or What is the highest level of education you have completed? = Postgraduate Degree (e.g. Master, etc.)

Q34 What area/s of study were they?

- ○ Agriculture or related field (1)
- ○ Environment/Natural Resource Management or related field (2)
- ○ Economics/Business or related field (3)
- ○ Sciences or related field (4)
- ○ Other (5) _____
- ○ Prefer not to answer (6)

End of Block: Demographics

End of survey

GRASS 1 survey invitation text (sent by DPs)

Subject: GRASS 1 program evaluation

Dear [**participant name**],

We are contacting you today to ask for your anonymous feedback on the first stage of the Queensland Government's Department of the Environment, Tourism, Science and Innovation's (DETSI) *Grazing Resilience and Sustainable Solutions* (GRASS) program, known as GRASS 1, which ran from 2019 to 2022.

Help improve the program for graziers by providing feedback

As a previous participant in GRASS 1, we would like your thoughts on what did and did not work well in this program and the impact it had on land management practices. The insights you provide will inform improvements to the delivery of the GRASS program in the future.

We ask that you provide feedback in a survey, which will take approximately 10 minutes to complete. The survey is being conducted independently by a team of social researchers from Mosaic Insights (part of the Alluvium Group of consulting companies).

You can choose whether to participate in the survey, and you may stop participating at any time. However, we would like to emphasise the importance of hearing from as many graziers as possible so that future programs may be improved with direct feedback from landholders such as yourself. If you choose to participate, you cannot be identified in the data, and all information you provide will be anonymous in the report back to the regional delivery partners and DETSI.

Your privacy is important to us

Your responses will remain confidential, and no names will be shared with any government department or included in the report provided to DETSI. We do not ask for any information that will identify you or your property in this survey, and your responses cannot be linked in any way to your email address. The information you provide will be reported in aggregate with responses from other graziers.

Project Contacts

If you have any questions or concerns about this project, please contact either:

Vicki Martin, Project Manager	vicki.martin@mosaicinsights.com.au	0456 494 915
Jess Walker, Project Coordinator	jess.walker@mosaicinsights.com.au	0448 767 300

Survey details

To start the survey, click here or the green button below. Please do not share this link with others. This survey is only for graziers who participated in GRASS 1.

Start survey

Note: Survey closes on Sunday 16th February, at midnight

Thank you for your time. We look forward to receiving your feedback as soon as possible.

Kind regards,

[**DP name**]

P2R Water Quality Framework risk ratings

E

Appendix E

P2R Water Quality Framework risk ratings

*CCC: categorical carrying capacity, CSR: categorical stocking rates, CIC: categorical Indian couch, CMPC: categorical management of poor condition

Id	How do you determine carrying capacity?	CCC	How do you manage stocking rates?	CSR	What proportion of your property has Indian couch?	CIC	How do you manage areas that are in poor (C) or very poor (D) condition?	CMPC	WQ Risk rating for Hillslope
8	Arrived at this figure through experience over time and consistent with the generally accepted view on what this country can carry	1	Use long term experience in conjunction with paddock diaries/similar records to assess and adjust stock numbers in every paddock before dry season starts (end of the growing season) to ensure adequate residual pasture and groundcover at break of season.	3	Not present	1	Most areas on the property that are in poor (C) or very poor (D) condition have been identified. Some actions including reduced stocking rates have been implemented.	2	B - Moderate to low water quality risk
21	Carrying capacity is determined using property maps indicating land types, infrastructure, assessments of land condition (e.g. ABCD), and distance to water. Historical stocking rate information, recorded in paddock books or similar, is used to inform assessments	4	Use long term experience in conjunction with paddock diaries/similar records to assess and adjust stock numbers in every paddock before dry season starts (end of the growing season) to ensure adequate residual pasture and groundcover at break of season.	3	High levels (obvious/ important grass in mix)	4	Most areas on the property that are in poor (C) or very poor (D) condition have been identified. Some actions including reduced stocking rates have been implemented.	2	A - Low water quality risk
16	Carrying capacity is determined using property maps indicating land types, infrastructure, assessments of land condition (e.g. ABCD), and distance to water. Historical stocking rate information, recorded in paddock books or similar, is used to inform assessments	4	Use long term experience in conjunction with paddock diaries/similar records to assess and adjust stock numbers in every paddock before dry season starts (end of the growing season) to ensure adequate residual pasture and groundcover at break of season.	3	Low levels (not obvious)	2	Areas in poor (C) or very poor (D) condition across the entire property have been identified. Stocking rates have been reduced and, in some areas, stock have been fully excluded.	3	A - Low water quality risk

7	Carrying capacity is determined using property maps indicating land types, infrastructure, assessments of land condition (e.g. ABCD), and distance to water. Historical stocking rate information, recorded in paddock books or similar, is used to inform assessments	4	Use long term experience in conjunction with paddock diaries/similar records to assess and adjust stock numbers in every paddock before dry season starts (end of the growing season) to ensure adequate residual pasture and groundcover at break of season.	3	Not present	1	Areas in poor (C) or very poor (D) condition across the entire property have been identified. Stocking rates have been reduced and, in some areas, stock have been fully excluded.	3	A - Low water quality risk
10	Carrying capacity is determined using property maps indicating land types, infrastructure, assessments of land condition (e.g. ABCD), and distance to water. Historical stocking rate information, recorded in paddock books or similar, is used to inform assessments	4	Use long term experience in conjunction with paddock diaries/similar records to assess and adjust stock numbers in every paddock before dry season starts (end of the growing season) to ensure adequate residual pasture and groundcover at break of season.	3	Not present	1	Areas in poor (C) or very poor (D) condition across the entire property have been identified. Stocking rates have been reduced and, in some areas, stock have been fully excluded.	3	A - Low water quality risk
12	Carrying capacity is determined using property maps indicating land types, infrastructure, assessments of land condition (e.g. ABCD), and distance to water. Historical stocking rate information, recorded in paddock books or similar, is used to inform assessments	4	Use long term experience in conjunction with paddock diaries/similar records to assess and adjust stock numbers in every paddock before dry season starts (end of the growing season) to ensure adequate residual pasture and groundcover at break of season.	3	Not present	1	Areas in poor (C) or very poor (D) condition across the entire property have been identified. Stocking rates have been reduced and, in some areas, stock have been fully excluded.	3	A - Low water quality risk

5	Carrying capacity is determined using property maps, observed trend in land condition, and historical stocking rate information, recorded in paddock books or similar, is used to inform assessments	4	Use long term experience in conjunction with paddock diaries/similar records to assess and adjust stock numbers in every paddock before dry season starts (end of the growing season) to ensure adequate residual pasture and groundcover at break of season.	3	Not present	1	Areas in poor (C) or very poor (D) condition across the entire property have been identified. Stocking rates have been reduced and, in some areas, stock have been fully excluded.	3	A - Low water quality risk
11	Carrying capacity is determined using property maps indicating land types, infrastructure, assessments of land condition (e.g. ABCD), and distance to water. Historical stocking rate information, recorded in paddock books or similar, is used to inform assessments	4	Use long term experience in conjunction with paddock diaries/similar records to assess and adjust stock numbers in every paddock before dry season starts (end of the growing season) to ensure adequate residual pasture and groundcover at break of season.	3	Not present	1	Stock have been fully excluded from all areas in poor (C) or very poor (D) condition across the property. Additional actions including diversion banks, ripping and seeding of bare or scalded areas as well as regularly spelling is undertaken.	4	A - Low water quality risk
13	Carrying capacity is determined using property maps indicating land types, infrastructure, assessments of land condition (e.g. ABCD), and distance to water. Historical stocking rate information, recorded in paddock books or similar, is used to inform assessments	4	Use long term experience in conjunction with paddock diaries/similar records to assess and adjust stock numbers in every paddock before dry season starts (end of the growing season) to ensure adequate residual pasture and groundcover at break of season.	3	Quite frequent (scattered in mix of grasses)	3	Stock have been fully excluded from all areas in poor (C) or very poor (D) condition across the property. Additional actions including diversion banks, ripping and seeding of bare or scalded areas as well as regularly spelling is undertaken.	4	A - Low water quality risk
6	Carrying capacity is determined using property maps, observed trend in land condition, and historical stocking rate information, recorded in paddock books or similar, is used to inform assessments	4	Use long term experience in conjunction with paddock diaries/similar records to assess and adjust stock numbers in every paddock before dry season starts (end of the growing season) to ensure adequate residual	3	Quite frequent (scattered in mix of grasses)	3	Stock have been fully excluded from all areas in poor (C) or very poor (D) condition across the property. Additional actions including diversion banks, ripping and seeding of bare or scalded	4	A - Low water quality risk

			pasture and groundcover at break of season.				areas as well as regularly spelling is undertaken.		
19	Carrying capacity is determined using property maps indicating land types, infrastructure, assessments of land condition (e.g. ABCD), and distance to water. Historical stocking rate information, recorded in paddock books or similar, is used to inform assessments	4	Use long term experience in conjunction with paddock diaries/similar records to assess and adjust stock numbers in every paddock before dry season starts (end of the growing season) to ensure adequate residual pasture and groundcover at break of season.	3	Very high levels (dominant)	5	Areas in poor (C) or very poor (D) condition across the entire property have been identified. Stocking rates have been reduced and, in some areas, stock have been fully excluded.	3	A - Low water quality risk
23	Carrying capacity is determined using property maps indicating land types, infrastructure, assessments of land condition (e.g. ABCD), and distance to water. Historical stocking rate information, recorded in paddock books or similar, is used to inform assessments	4	Use long term experience in conjunction with paddock diaries/similar records to assess and adjust stock numbers in every paddock before dry season starts (end of the growing season) to ensure adequate residual pasture and groundcover at break of season.	3	Very high levels (dominant)	5	Areas in poor (C) or very poor (D) condition across the entire property have been identified. Stocking rates have been reduced and, in some areas, stock have been fully excluded.	3	A - Low water quality risk
9	Carrying capacity is determined using property maps indicating land types, infrastructure, assessments of land condition (e.g. ABCD), and distance to water. Historical stocking rate information, recorded in paddock books or similar, is used to inform assessments	4	Routinely use forage budgets, grazing charts (or similar) and electronic and/or hard copy paddock/ stock records to adjust cattle numbers in every paddock to ensure adequate residual pasture and groundcover at break of season.	4	Low levels (not obvious)	2	Stock have been fully excluded from all areas in poor (C) or very poor (D) condition across the property. Additional actions including diversion banks, ripping and seeding of bare or scalded areas as well as regularly spelling is undertaken.	4	A - Low water quality risk

14	Carrying capacity is determined using property maps indicating land types, infrastructure, assessments of land condition (e.g. ABCD), and distance to water. Historical stocking rate information, recorded in paddock books or similar, is used to inform assessments. Additional pasture monitoring tools, such as grazing charts, are used	4	Routinely use forage budgets, grazing charts (or similar) and electronic and/or hard copy paddock/ stock records to adjust cattle numbers in every paddock to ensure adequate residual pasture and groundcover at break of season.	4	Low levels (not obvious)	2	Stock have been fully excluded from all areas in poor (C) or very poor (D) condition across the property. Additional actions including diversion banks, ripping and seeding of bare or scalded areas as well as regularly spelling is undertaken.	4	A - Low water quality risk
15	Carrying capacity is determined using property maps indicating land types, infrastructure, assessments of land condition (e.g. ABCD), and distance to water. Historical stocking rate information, recorded in paddock books or similar, is used to inform assessments. Additional pasture monitoring tools, such as grazing charts, are used	4	Routinely use forage budgets, grazing charts (or similar) and electronic and/or hard copy paddock/ stock records to adjust cattle numbers in every paddock to ensure adequate residual pasture and groundcover at break of season.	4	Low levels (not obvious)	2	Stock have been fully excluded from all areas in poor (C) or very poor (D) condition across the property. Additional actions including diversion banks, ripping and seeding of bare or scalded areas as well as regularly spelling is undertaken.	4	A - Low water quality risk

20	Carrying capacity is determined using property maps indicating land types, infrastructure, assessments of land condition (e.g. ABCD), and distance to water. Historical stocking rate information, recorded in paddock books or similar, is used to inform assessments. Additional pasture monitoring tools, such as grazing charts, are used	4	Routinely use forage budgets, grazing charts (or similar) and electronic and/or hard copy paddock/ stock records to adjust cattle numbers in every paddock to ensure adequate residual pasture and groundcover at break of season.	4	Quite frequent (scattered in mix of grasses)	3	Stock have been fully excluded from all areas in poor (C) or very poor (D) condition across the property. Additional actions including diversion banks, ripping and seeding of bare or scalded areas as well as regularly spelling is undertaken.	4	A - Low water quality risk
25	Carrying capacity is determined using property maps indicating land types, infrastructure, assessments of land condition (e.g. ABCD), and distance to water. Historical stocking rate information, recorded in paddock books or similar, is used to inform assessments	4	Routinely use forage budgets, grazing charts (or similar) and electronic and/or hard copy paddock/ stock records to adjust cattle numbers in every paddock to ensure adequate residual pasture and groundcover at break of season.	4	Quite frequent (scattered in mix of grasses)	3	Stock have been fully excluded from all areas in poor (C) or very poor (D) condition across the property. Additional actions including diversion banks, ripping and seeding of bare or scalded areas as well as regularly spelling is undertaken.	4	A - Low water quality risk
26	Carrying capacity is determined using property maps indicating land types, infrastructure, assessments of land condition (e.g. ABCD), and distance to water. Historical stocking rate information, recorded in paddock books or similar, is used to inform assessments. Additional pasture monitoring tools, such as grazing charts, are used	4	Routinely use forage budgets, grazing charts (or similar) and electronic and/or hard copy paddock/ stock records to adjust cattle numbers in every paddock to ensure adequate residual pasture and groundcover at break of season.	4	Very high levels (dominant)	5	Areas in poor (C) or very poor (D) condition across the entire property have been identified. Stocking rates have been reduced, and, in some areas, stock have been fully excluded.	3	A - Low water quality risk